

REPORT NO. 207-KAR-04-003

**SAFETY COMPLIANCE TESTING
FOR FMVSS 207**

SEATING SYSTEMS

2004 NISSAN
MAXIMA
4 DOOR SEDAN

NHTSA NO. C45204

PREPARED BY:
KARCO ENGINEERING, LLC
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ADELANTO, CALIFORNIA 92301



July 7, 2004

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
SAFETY ASSURANCE
OFFICE OF VEHICLE SAFETY COMPLIANCE
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400 SEVENTH STREET, SW
WASHINGTON, D.C. 20590

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SECTION 1
PURPOSE OF COMPLIANCE TEST

1. PURPOSE OF COMPLIANCE TEST

Tests were conducted on a 2004 Nissan Maxima 4 Door Sedan, manufactured by Nissan Motor Company, to determine compliance with FMVSS 207, "Seating Systems". The purpose of this standard is to reduce the number of deaths and injuries that may be caused by the failure of seats, their attachment hardware, and their installation when said failure results from the forces on the seat in a vehicle impact.

All tests were conducted based on the current National Highway Traffic Safety Administration (NHTSA), Office of Vehicle Safety Compliance (OVSC) Laboratory Procedures, TP-207-09, dated June 18, 1992, and corresponding KARCO Engineering, LLC test procedure KTP-207, dated August 2, 2002. Detailed procedures for receiving, inspecting, testing and reporting of test results are described in the test procedures and are not repeated in this report.

This report is organized in sections containing pertinent test information and data tables as follows:

- Section 2 - Compliance Test Procedure and Data Summary
- Section 3 - Compliance Test Data
- Section 4 - Noncompliance Data (if applicable)
- Appendix A - Photographs
- Appendix B - Data Plots
- Appendix C - Test Equipment List and Calibration Information

SECTION 2
COMPLIANCE TEST PROCEDURE and DATA SUMMARY

2. COMPLIANCE TEST PROCEDURE AND DATA SUMMARY

A 2004 Nissan Maxima 4 Door Sedan was subjected to FMVSS 207 compliance testing on June 14 through June 24, 2004. All tests were conducted at KARCO Engineering, LLC in Adelanto, California. Summary data is shown on Data Sheet No. 2. The following tests were performed:

- Receiving inspection
- Aft moment tests on front seat backs
- Aft load tests on front seat frames and adjusters
- Forward load tests on front seat frames and adjusters
- Forward load tests on front set frames and adjusters, including FMVSS 210 Loads
- Forward load test on rear seat cushions and seat backs

The tests were conducted per the FMVSS 207 test procedure. The significant aspects of the test procedure are described in the following paragraphs.

2.1 Test Vehicle Inspection. The test vehicle was inspected to verify that all seat, restraint systems and seat belt assembly anchorage systems are complete and the seat adjusting mechanisms are working properly.

2.2 Test Vehicle Preparation and Pre-test Measurements. The test vehicle was securely mounted to the test fixture and connected to the appropriate number of hydraulic actuators. Lateral spacing of the individual seat anchorages were measured and all other angular and dimensional measurements were verified to be in compliance with the requirements of the subject safety standards. The components were weighed and their centers of gravity determined.

2.3 Static Load Tests-General Performance Requirements.

When tested in accordance with S5, each occupant seat, other than a side-facing seat or a passenger seat on a bus, shall withstand the following forces:

- (a) In any position to which it can be adjusted — 20 times the weight of the seat applied in a forward longitudinal direction;

(Continued on next page)

2. (Continued)

- (b) In any position to which it can be adjusted — 20 times the weight of the seat applied in a rearward longitudinal direction;
- (c) For a seat belt assembly attached to the seat — the force specified in subparagraph (a), if it is a forward facing seat, or subparagraph (b), if it is a rearward facing seat, in each case applied simultaneously with the forces imposed on the seat by the seat belt assembly when it is loaded in accordance with section S4.2 of Federal Motor Vehicle Safety Standard No. 210; and
- (d) In its rearmost position — a force that produces a 3,300 inch-pound moment about the seating reference point (SRP) for each designated seating position (DSP) that the seat provides, applied to the upper cross-member of the seat back or the upper seat back, in a rearward longitudinal direction for forward-facing seats and in a forward longitudinal direction for rearward-facing seats.
- (e) To meet FMVSS 210 requirements, the anchorages, attachment hardware, and attachment bolts for all Type 2 and automatic seat belt assemblies that are installed to comply with Standard No. 208 (49 CFR 571.208) shall withstand 3,000 pound forces when tested in accordance with S5.2.

SECTION 3
COMPLIANCE TEST DATA

3. COMPLIANCE TEST DATA

The results of FMVSS 207 compliance tests that were conducted on the 2004 Nissan Maxima 4 Door Sedan on June 14, through June 24, 2004, to determine compliance with FMVSS 207, "Seating Systems" is presented in this section. No performance failures were identified for the vehicle tested.

DATA SHEET NO. 2
SEATING SYSTEM TEST RESULTS

VEHICLE			
YEAR	2004	MAKE	NISSAN
MODEL	MAXIMA	BODY STYLE	4 DOOR SEDAN
NHTSA NO.	C45204	VIN	1N4BA41E44C868150
BUILD DATE	10/03	TEST DATE	06/14/04 - 06/24/04
TEST LABORATORY	KARCO ENGINEERING, L.L.C.		

LEGEND: Wa - Weight of Seat Assembly
 Wb - Weight of Seat Back
 Wc - Weight of Seat Cushion
 Z - Distance from Seat SRP to Uppermost Crossmember = 17.2 "

FOR FRONT BUCKET SEATS -- LEFT SIDE

COMPONENT	LOAD DIRECTION	COMPONENT WEIGHT (lbs)	REQUIRED LOAD (lbs)	ACTUAL LOAD (lbs)	PEAK MOMENT (in-lbs)	ATTACHMENT (PASS/FAIL)
Seat Back	Forward	Wb = N/A	20 x Wb = N/A	N/A	N/A	N/A
Seat Assy.	Forward	Wa = 54	20 x Wa = 1080	1079.0	N/A	PASS
	Rearward	Wa = 54	20 x Wa = 1080	1069.1	N/A	PASS
Seat Back Moment	Rearward	N/A	3275 in-lb/Z	187.8	3230.16	PASS

FOR FRONT BUCKET SEATS -- RIGHT SIDE

COMPONENT	LOAD DIRECTION	COMPONENT WEIGHT (lbs)	REQUIRED LOAD (lbs)	ACTUAL LOAD (lbs)	PEAK MOMENT (in-lbs)	ATTACHMENT (PASS/FAIL)
Seat Back	Forward	Wb = N/A	20 x Wb = N/A	N/A	N/A	N/A
Seat Assy.	Forward	Wa = 42	20 x Wa = 840	839.6	N/A	PASS
	Rearward	Wa = 42	20 x Wa = 840	823.2	N/A	PASS
Seat Back Moment	Rearward	N/A	3275 in-lb/Z	190.1	3269.7	PASS

(Continued on next page)

DATA SHEET NO. 2 Continued

FOR FRONT BUCKET SEATS - - COMBINED

COMPONENT	LOAD DIRECTION	COMPONENT WEIGHT (lbs)	REQUIRED LOAD (lbs)	ACTUAL LOAD (lbs)	ATTACHMENT (PASS/FAIL)
Driver Lap Belt	Forward	N/A	3,000 lbs, -10, -50	2995.9	PASS
Driver Shoulder Belt	Forward	N/A	3,000 lbs, -10, -50	2994.6	PASS
Center Lap Belt	Forward	N/A	6,000 lbs, -10, -50	N/A	PASS
Passenger Lap Belt	Forward	N/A	3,000 lbs, -10, -50	2985.2	PASS
Passenger Shoulder Belt	Forward	N/A	3,000 lbs, -10, -50	2984.3	PASS
Driver Seat Assembly	Forward	W _a = 54	20 x W _a = 1080	1071.1	PASS
Passenger Seat Assembly	Forward	W _a = 42	20 x W _a = 840	838.7	PASS

LEGEND: W_a - Weight of Seat Assembly

W_b - Weight of Seat Back

W_c - Weight of Seat Cushion

Z - Distance from Seat SRP to Uppermost Crossmember = 17.2 "

FOR REAR SEATS - -

COMPONENT	LOAD DIRECTION	COMPONENT WEIGHT (lbs)	REQUIRED LOAD (lbs)	ACTUAL LOAD (lbs)	PEAK MOMENT (in-lbs)	ATTACHMENT (PASS/FAIL)
Cushion	Forward	W _c = 12	20 x W _c = 240	235.5	N/A	PASS
Left Back	Forward	W _b = 28	20 x W _b = 560	557.7	N/A	PASS
Right Back	Forward	W _b = 18	20 x W _b = 360	357.6	N/A	PASS

COMMENTS:

RECORDED BY: MARK A. KRATZKE

DATE: 06/14/04

APPROVED BY: MATTHEW A. IVORY

DATE: 06/14/04

**DATA SHEET NO. 3
SEAT BACK ANGLES**

VEHICLE			
YEAR	2004	MAKE	NISSAN
MODEL	MAXIMA	BODY STYLE	4 DOOR SEDAN
NHTSA NO.	C45204	VIN	1N4BA41E44C888150
BUILD DATE	10/03	TEST DATE	08/14/04 - 08/24/04
TEST LABORATORY	KARGO ENGINEERING, L.L.C.		

LAP BELT ANCHORAGES:

SEAT	SEATING POSITION	SPECIFIED ANGLE RANGE ABOVE HORIZONTAL	MEASURED ANGLE		DOES BELT SECURELY FIT ON PELVIS?
			I/B	O/B	
FRONT	Left	30 to 75 degrees	45	47	YES
	Center	30 to 75 degrees	N/A	N/A	N/A
	Right	30 to 75 degrees	38	44	YES
REAR	Left	30 to 75 degrees	46	46	YES
	Center	30 to 75 degrees	42	50	YES
	Right	30 to 75 degrees	45	50	YES

SHOULDER BELT ANCHORAGES:

SEAT	SEATING POSITION	SPECIFIED ANGLE RANGE ABOVE OR BELOW HORIZONTAL	MEASURED ANGLE
FRONT	Left	0 - 80 degrees above	8°
		0 - 40 degrees below	N/A
	Right	0 - 80 degrees above	7°
		0 - 40 degrees below	N/A
REAR	Left	0 - 80 degrees above	N/A
		0 - 40 degrees below	6°
	Center	0 - 80 degrees above	N/A
		0 - 40 degrees below	10°
	Right	0 - 80 degrees above	N/A
		0 - 40 degrees below	6°

RECORDED BY: MARK A. KRATZKE DATE: 08/14/04

APPROVED BY: MATTHEW A. IVORY DATE: 08/14/04

DATA SHEET NO. 4**REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING**

The following vehicle has been subjected to compliance testing for FMVSS No. 207

VEHICLE			
NHTSA NO.	C45204	TEST DATE	06/14/04 - 06/24/04
CONTRACT NO.	DTNH22-01-C-31025	VIN	1N4BA41E44C868150
SEAT CONFIGURATION			
VEHICLE OR SEAT MANUFACTURER		NISSAN MOTOR COMPANY	
TEST LABORATORY		KARCO ENGINEERING, L.L.C.	

The vehicle was inspected upon arrival at the laboratory for the test and found to contain all of the equipment listed below. All variances have been reported within 2 working days of vehicle arrival, by letter, to the NHTSA Industrial Property Manager (NAD-30), with a copy to the OVSC COTR. The vehicle is again inspected, after the above test has been conducted, and all changes are noted below. The final condition of the vehicle is also noted in detail.

TEST VEHICLE INFORMATION			
Manufacturer	NISSAN MOTOR COMPANY	VIN	1N4BA41E44C868150
Manufacturing Date	10/03	Delivery Date	03/15/83
Dealer	EMPIRE NISSAN	NHTSA No.	C45204
Odometer Reading (mi.)	3.6	Fuel Type	GAS
Engine Displacement	3.5 LITERS	Cylinders	6
Transmission	4 SPEED AUTOMATIC	Final Drive	FRONT
Engine Placement	TRANSVERSE	Color	BLUE
Tire Press./Max. Cap. Front	32 psi	Cold Tire Press. Front	32 psi
Tire Press./Max. Cap. Rear	32 psi	Cold Tire Press. Rear	32 psi
Recommend Tire Size	P245/45 R18 96V	Type of Spare	T145 / 80 R17
Tire Size on Vehicle	P245/45 R18 96V	Manufacturer	GOODYEAR
GVWR	4546	Cargo Capacity	860
GAWR Front	2489	GAWR Rear	2097
Air Conditioning	YES	Power Steering	YES
Power Brakes	YES	AM/FM/Cassette	YES
Disc Brakes (Front)	YES	Disc Brakes (Rear)	NO
Power Windows	YES	Tilt Steering	YES
Anti-lock Brakes (ABS)	YES	Power Seats	YES
Driver Airbag	YES	Passenger Airbag	YES

Test Vehicle Condition: FRONT OF VEHICLE WAS REMOVED, SEATS WERE TESTED.

RECORDED BY: MARK A. KRATZKE

DATE: 06/24/04

APPROVED BY: MATTHEW A. IVORY

DATE: 06/24/04

APPENDIX A
PHOTOGRAPHS

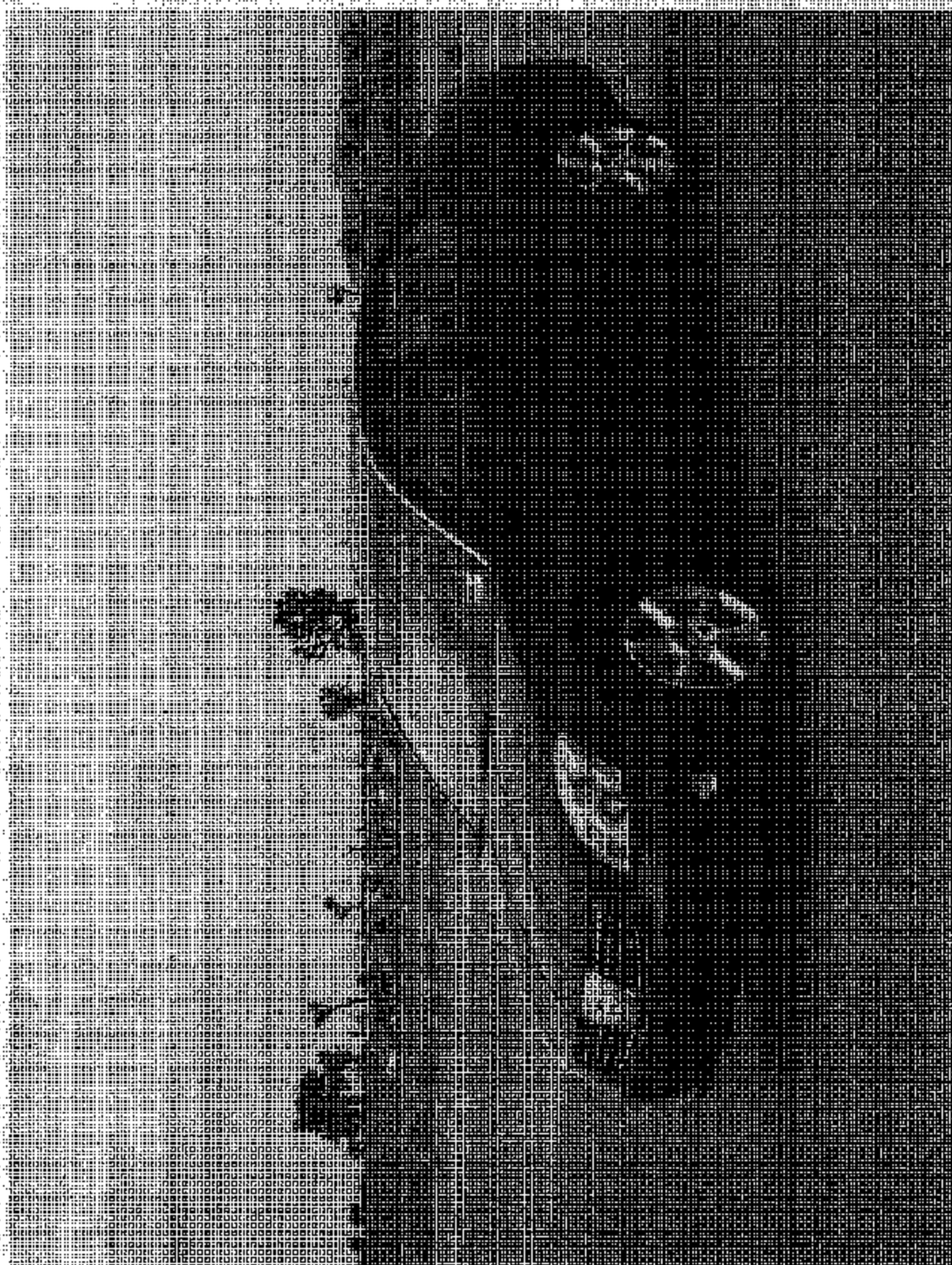


Figure A-1: Left Front (as Received)

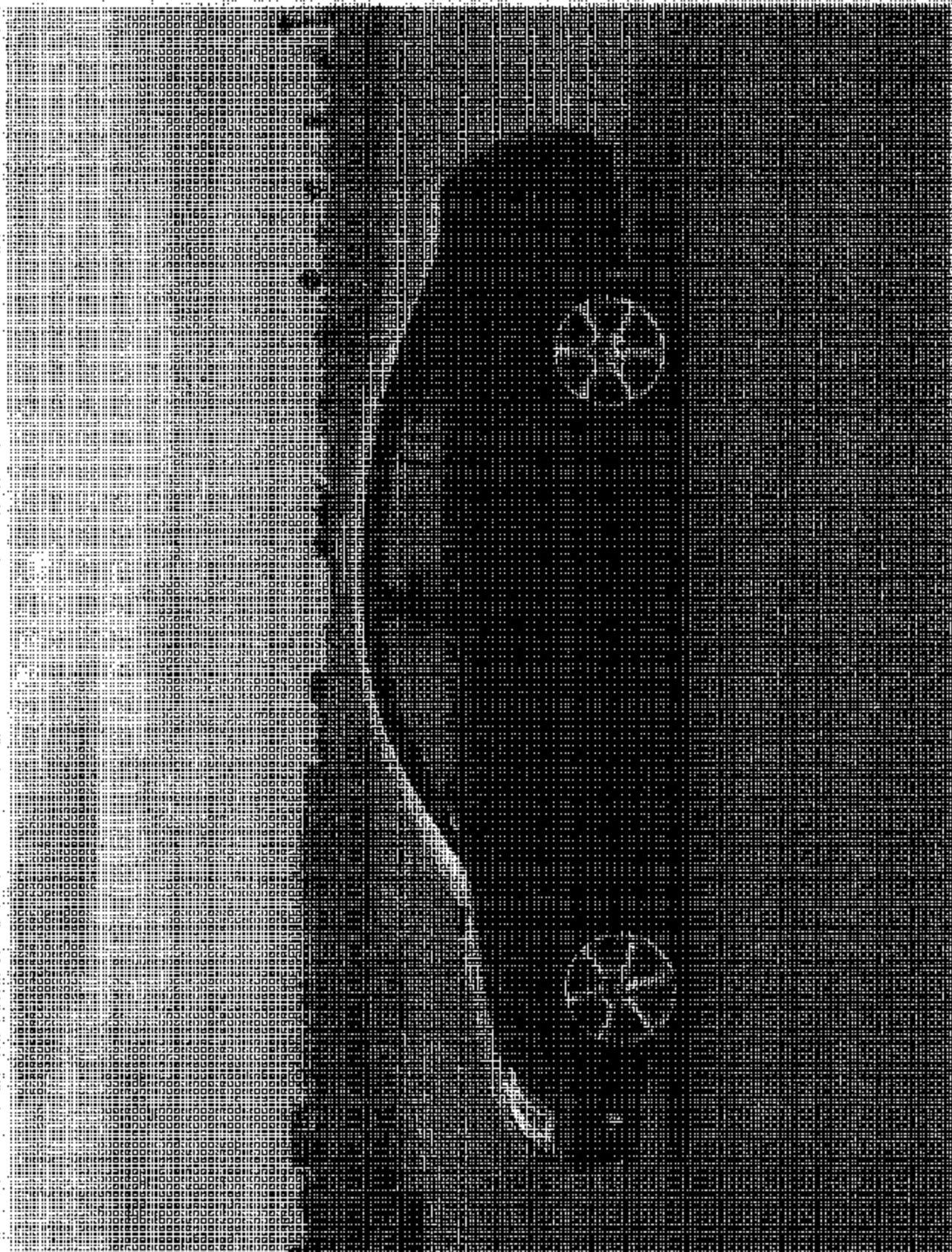


FIGURE A-2: Left Side (as Received)

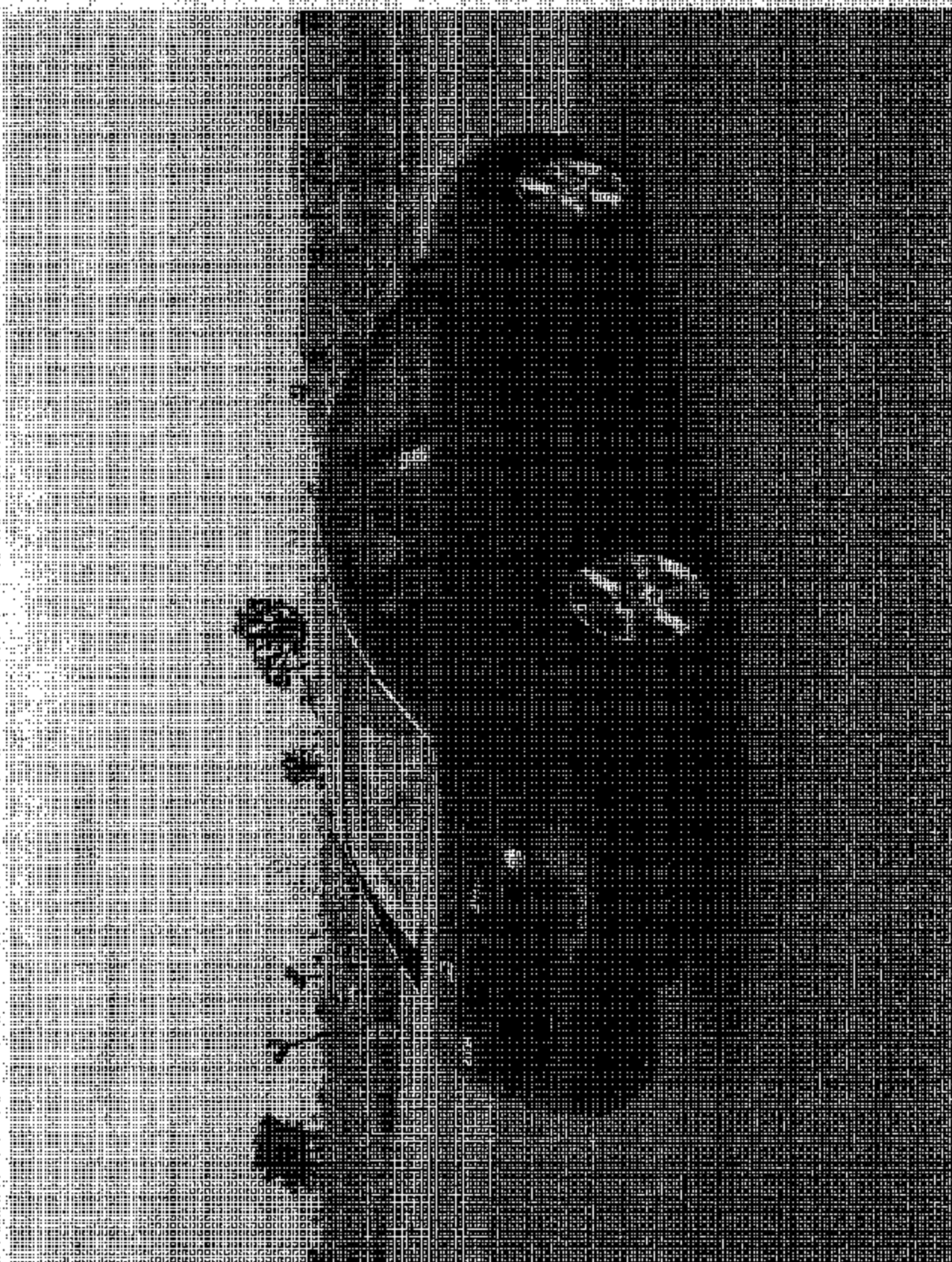


Figure A-3: Night View (as Recalculated)

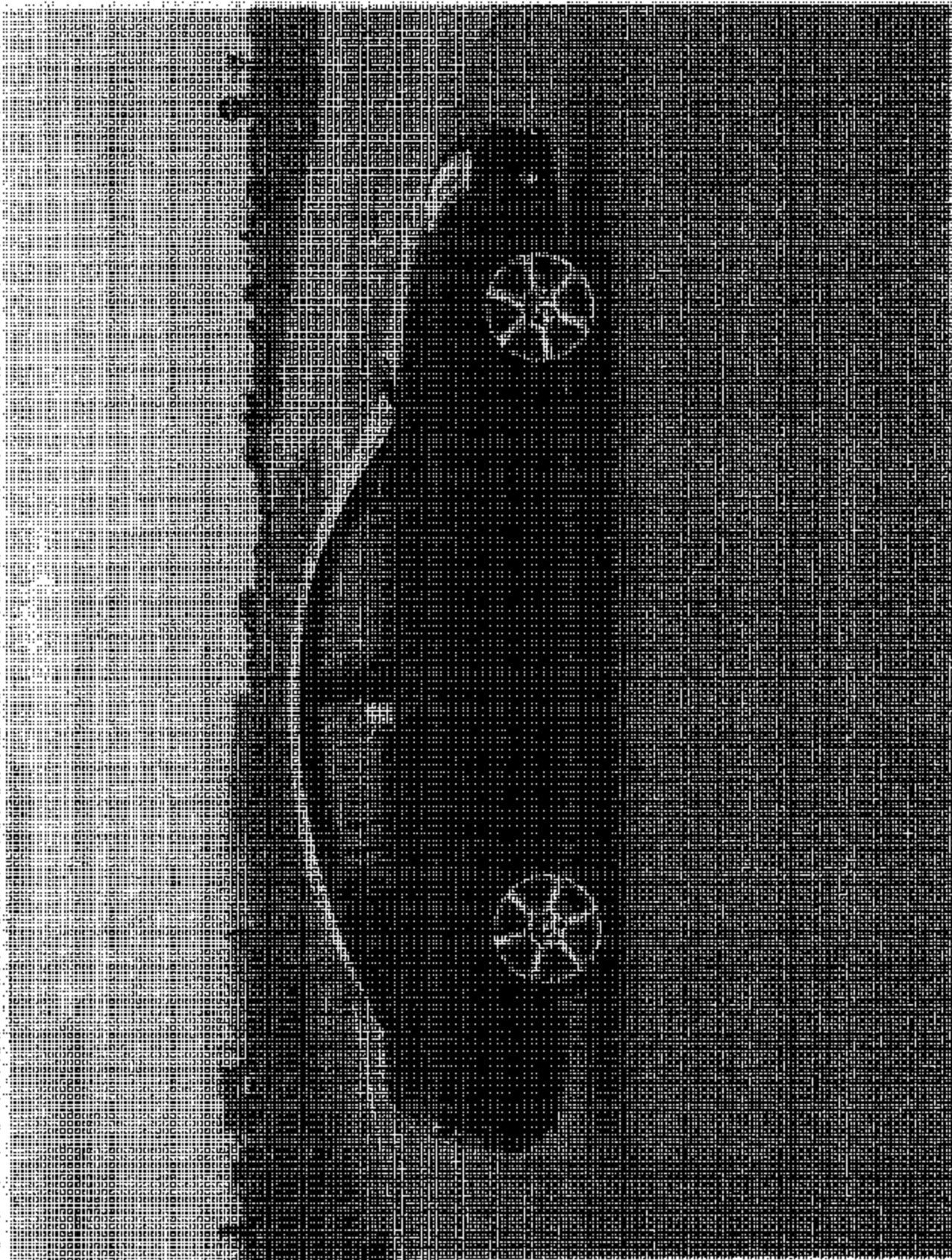


Figure A-4 Right Side (Facing)



Figure A-5. Vehicle Certification Label

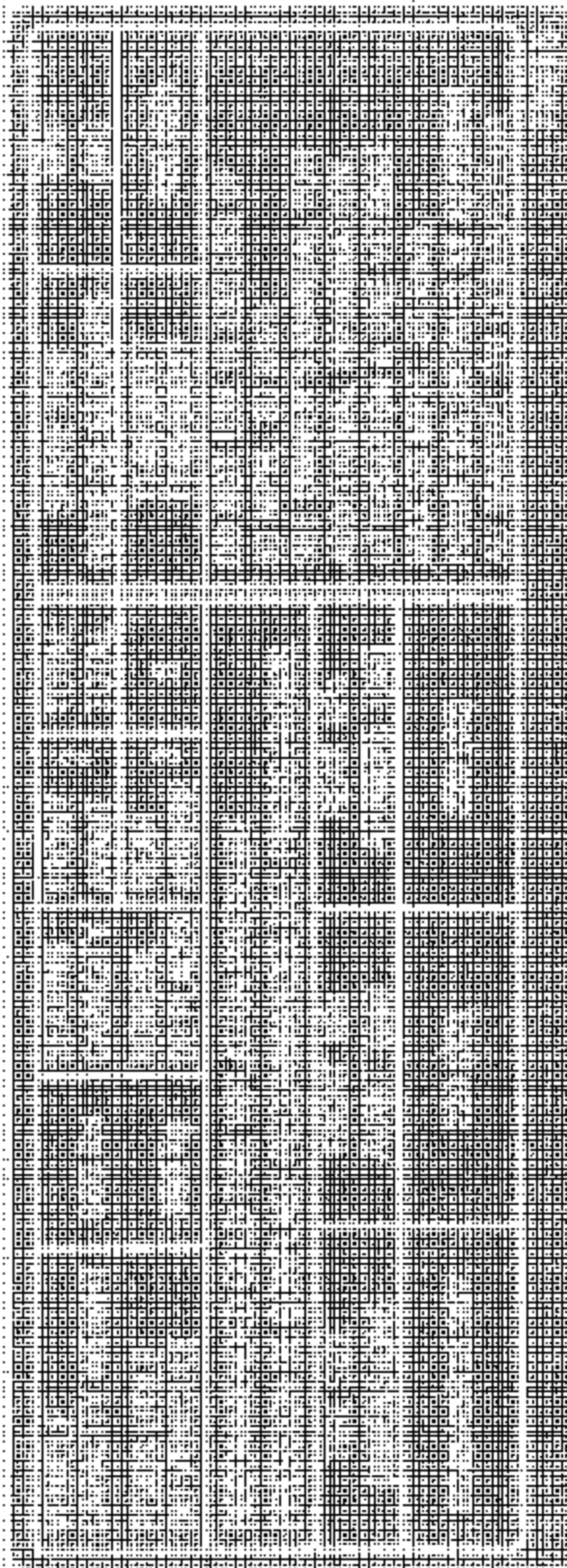


Figure A-8. Vertical Tile Layout



Figure A-7: Vehicles Mounted in Test Fixture



Figure A-3: Vehicle Mounted on Test Fixture

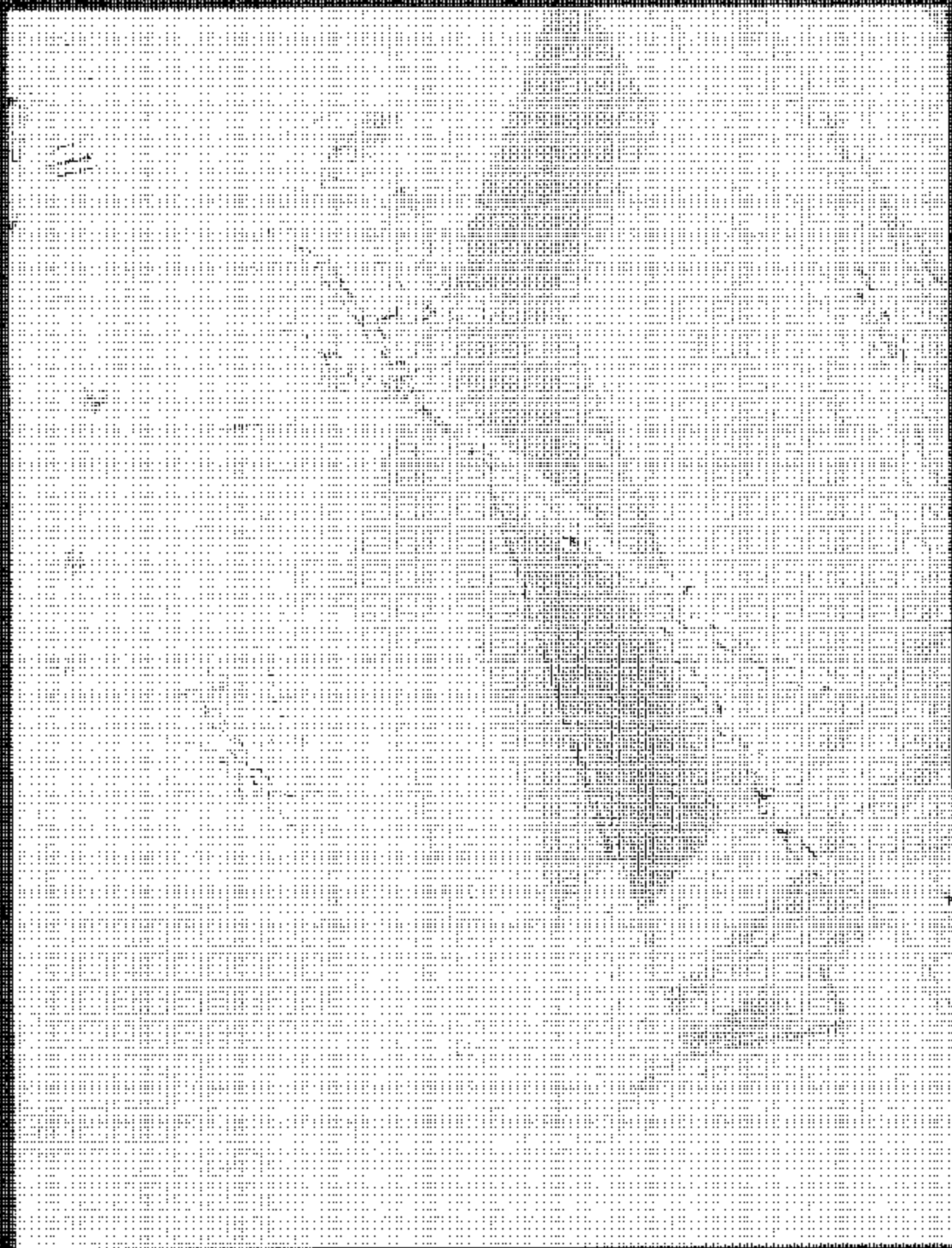


Figure A-5: Voltage Measured in Test Fixture

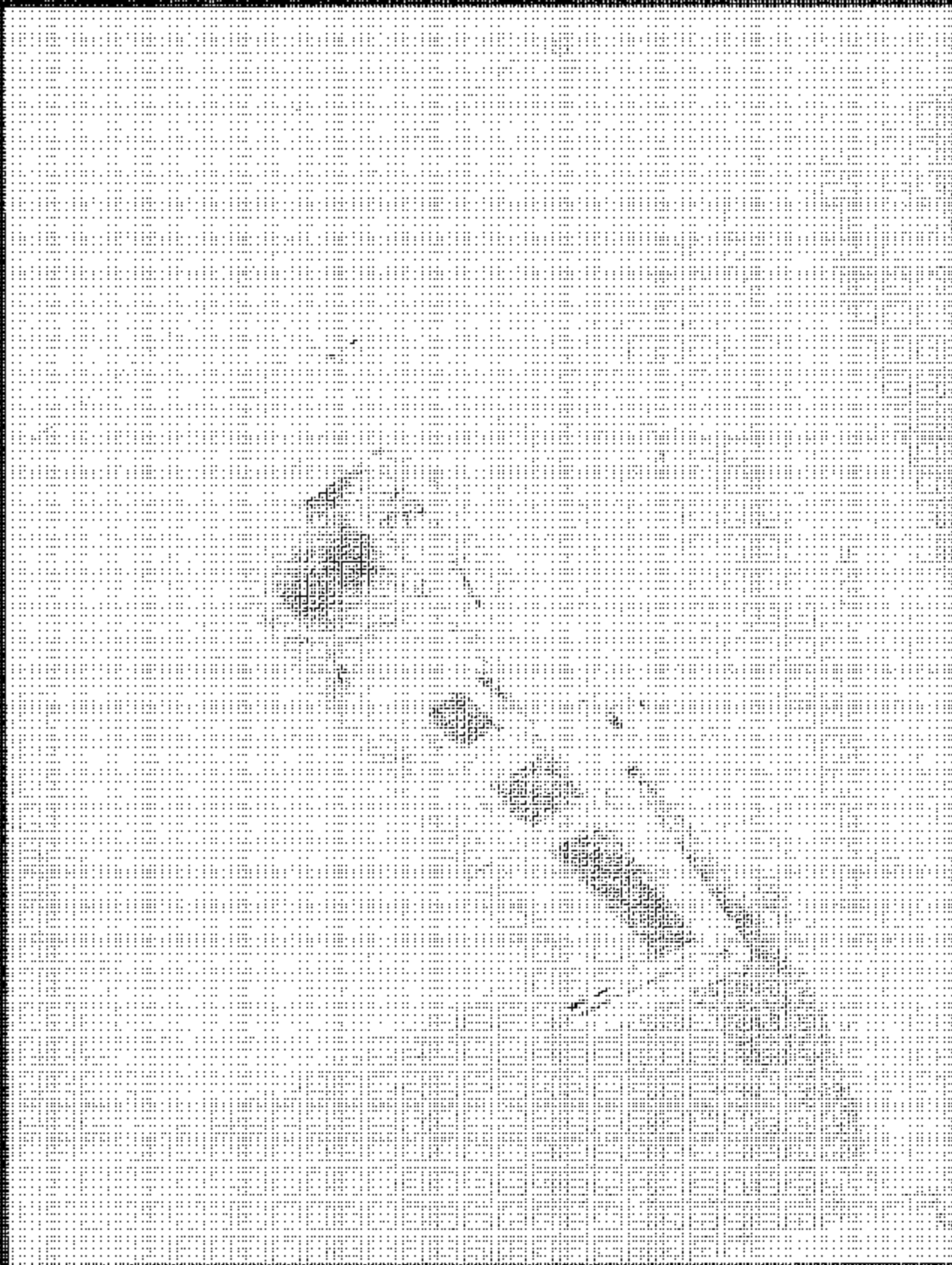


Figure A-10: Vehicle Mounted in Test Fixture

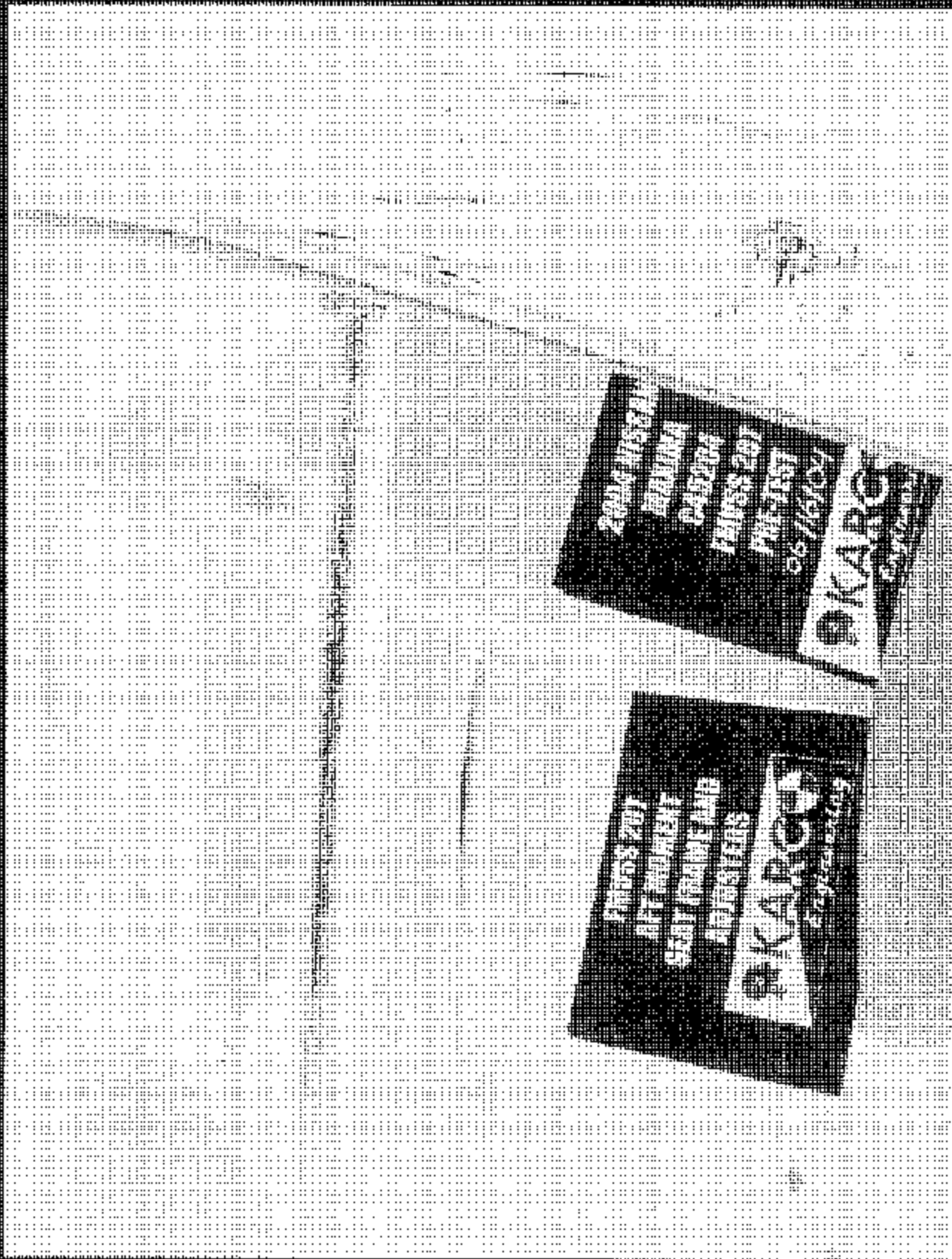


Figure A-11: Air Mount on Seat Frame and Adjusters, Driver's Side, Pro-Test



Figure A-12: Air Mount on Seat Frame and Adjusters, Owner's Seat Post-Test

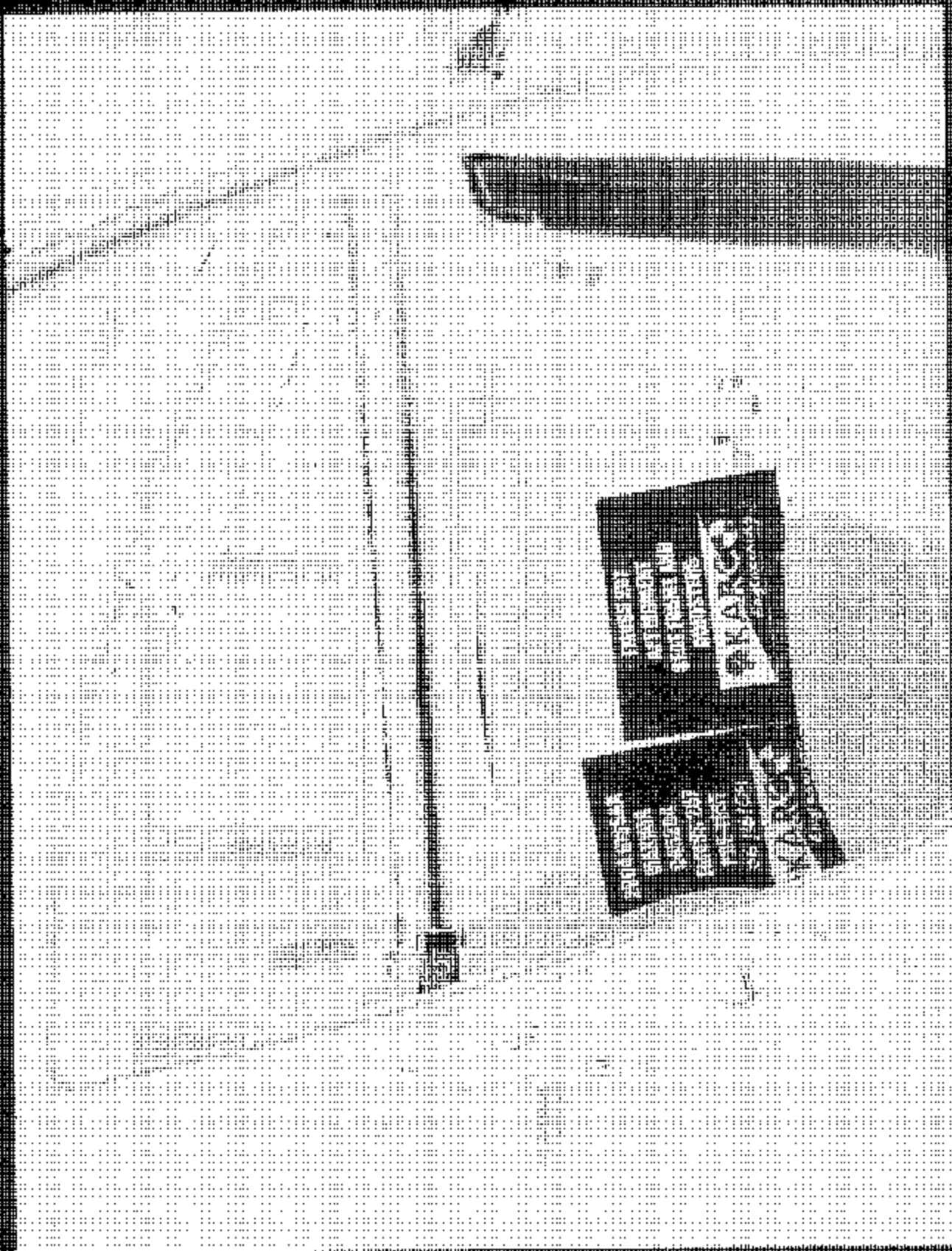


Figure A-13. Air Moment on Seat Frame and Adjusters, Passenger's Side, Pre-Test

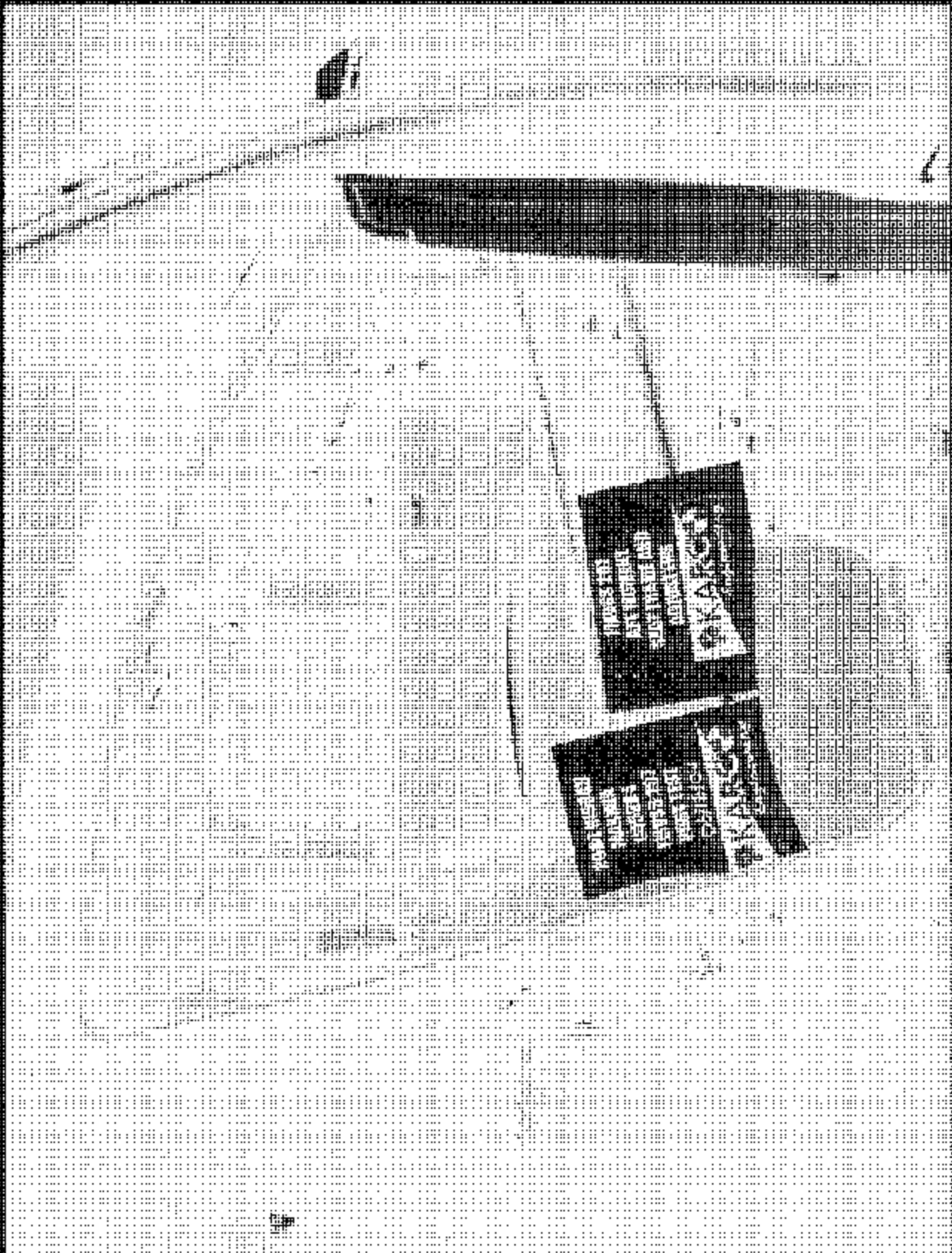


Figure A-14. Alt. Moment on Seat Frame and Adjacent Passenger's Side, Post-Test



Figure A-15. All Load on Seat Frame and Adjusters. Driver's Side. Pre-Fail

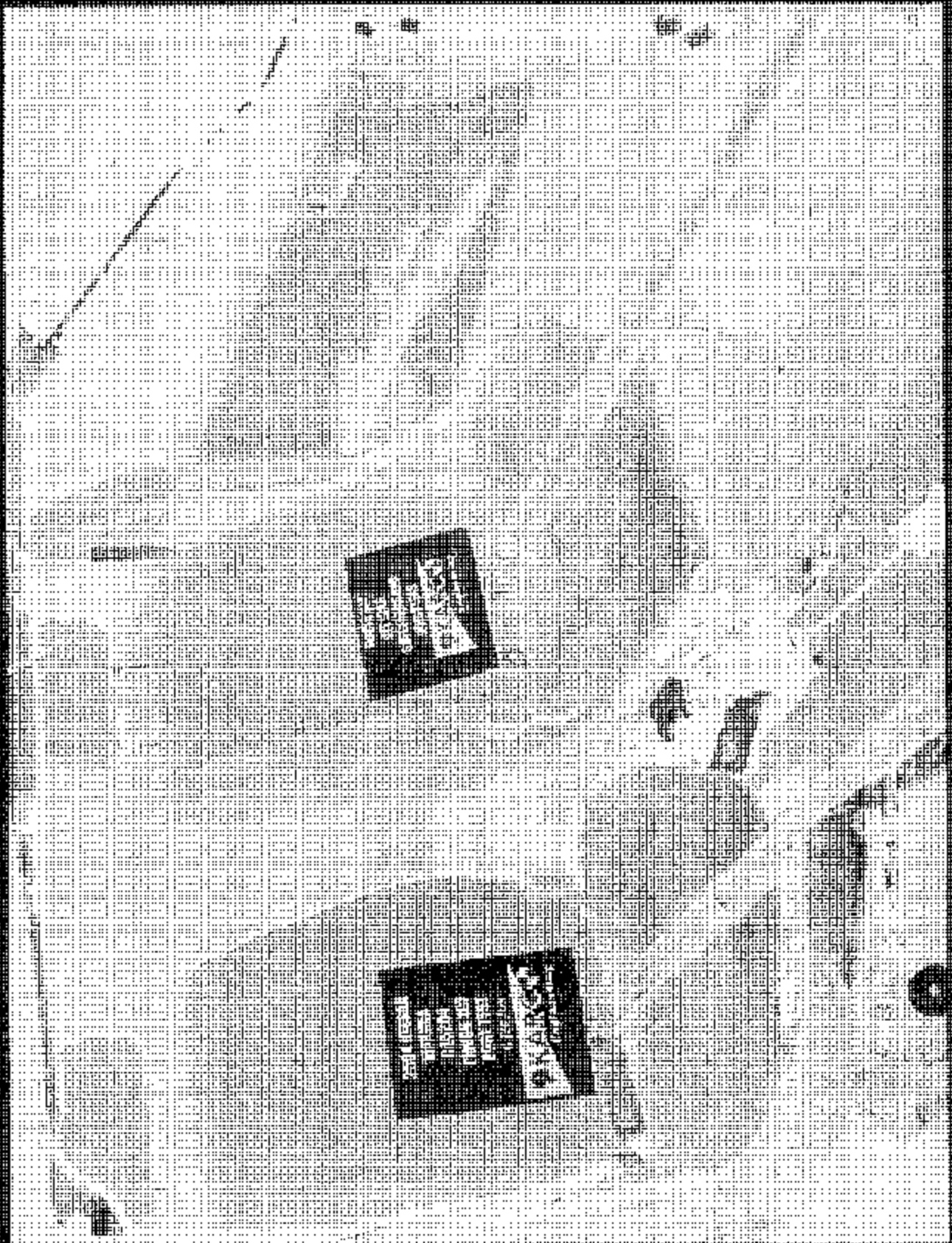


Figure A-16: Air Load on Seat Frame and Adjusters, Driver's Side, Post-Test

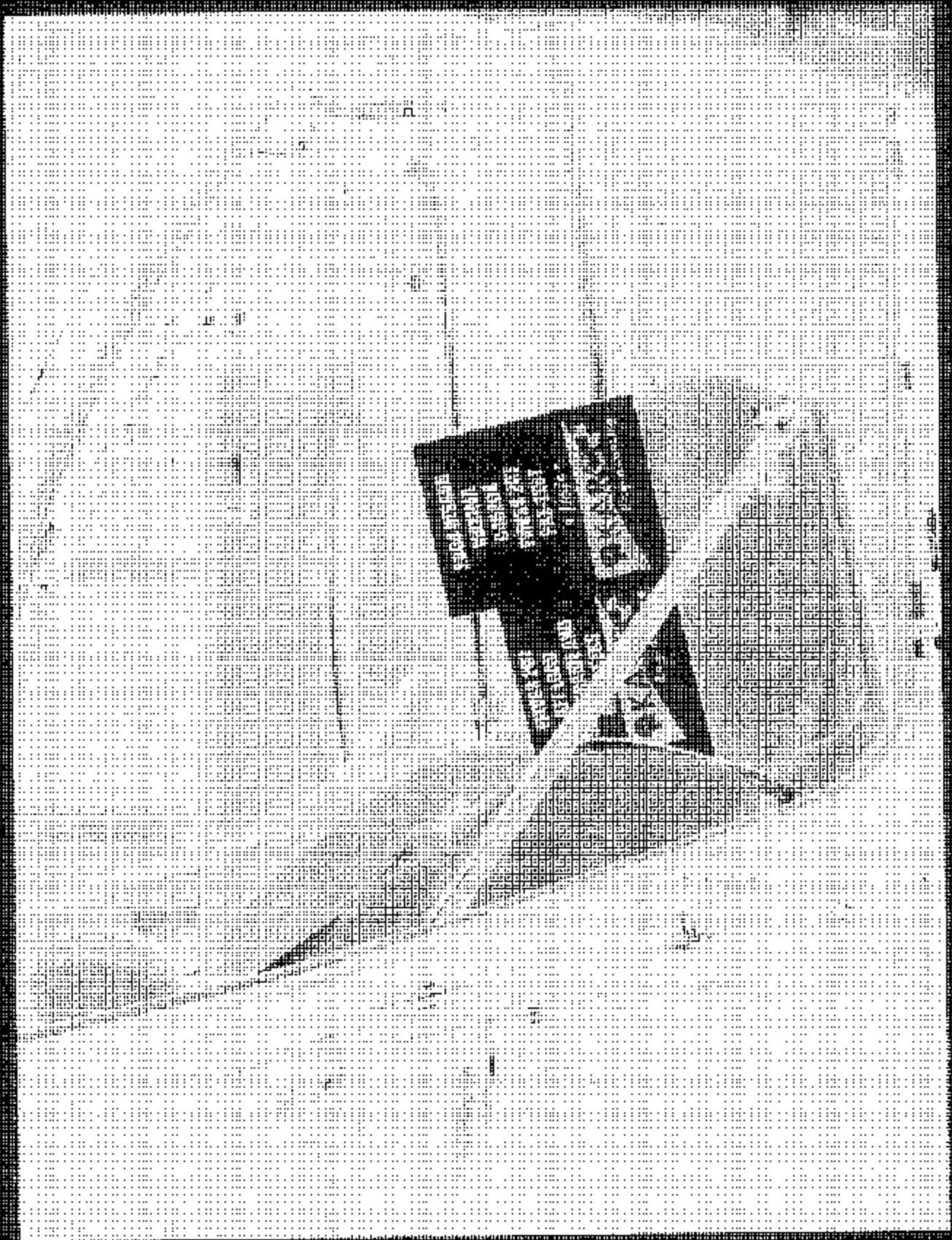


Figure A-17. Air Load on Seat Frame and Adjusters, Passenger's Side, Pre-Test

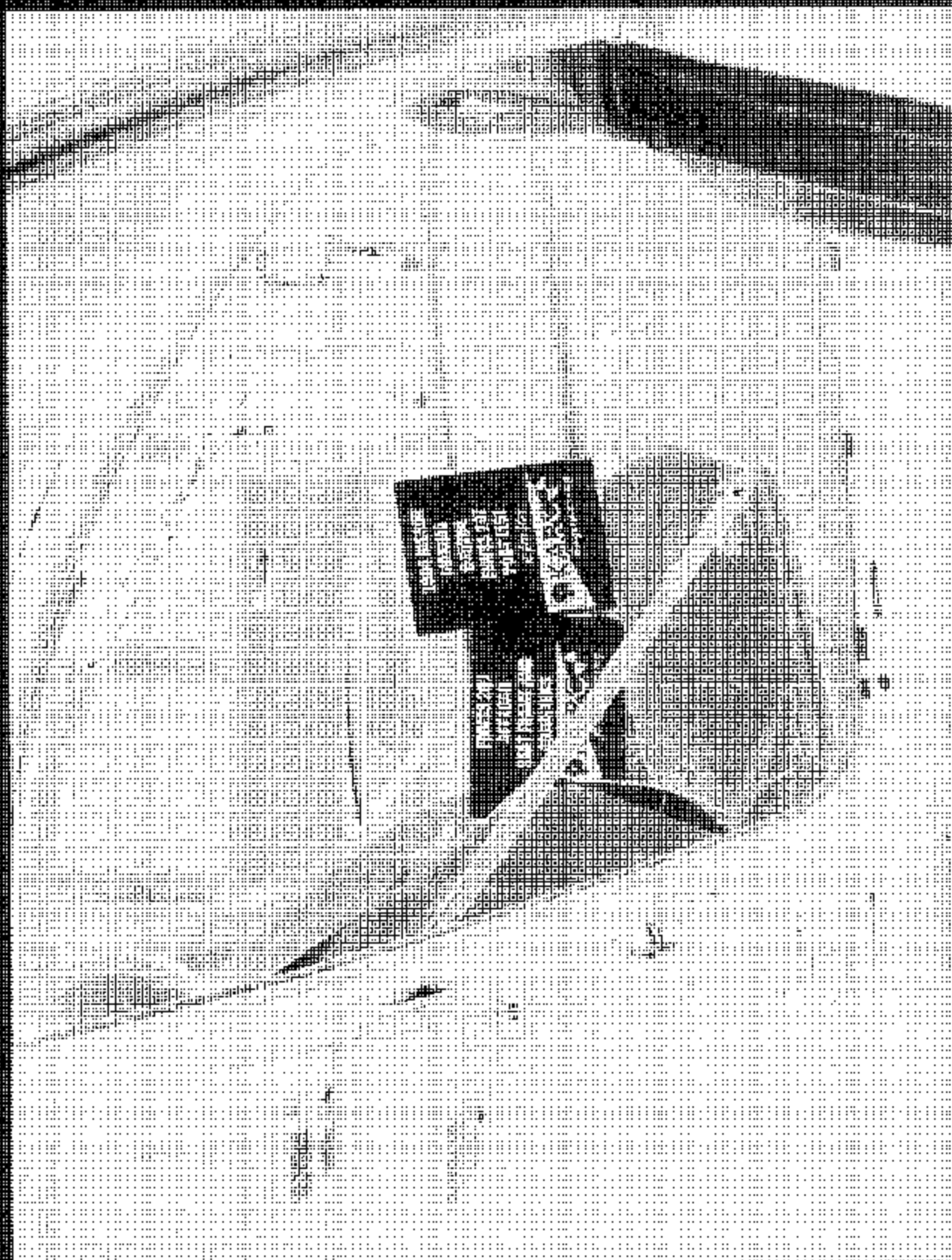


Figure A-18: Air Load on Seat Frame and Attachments, Passenger's Seat, Pre-Test

Photograph Not Available

Figure A-19: Forward Load on Seat Frame and Adjusters, Driver's Side, Pre-Test

Photograph Not Available

Figure A-20: Forward Load on Seat Frame and Adjusters, Driver's Side, Post-Test

Photograph Not Available

Figure A-21: Forward Load on Seat Frame and Adjusters, Passenger's Side, Pre-Test

Photograph Not Available

Figure A-22: Forward Load on Seat Frame and Adjusters, Passenger's Side, Post-Test



Figure A-23: 207/210 Forward Load on Seat Frame and Adjusters, Driver's Side, Flo-Test

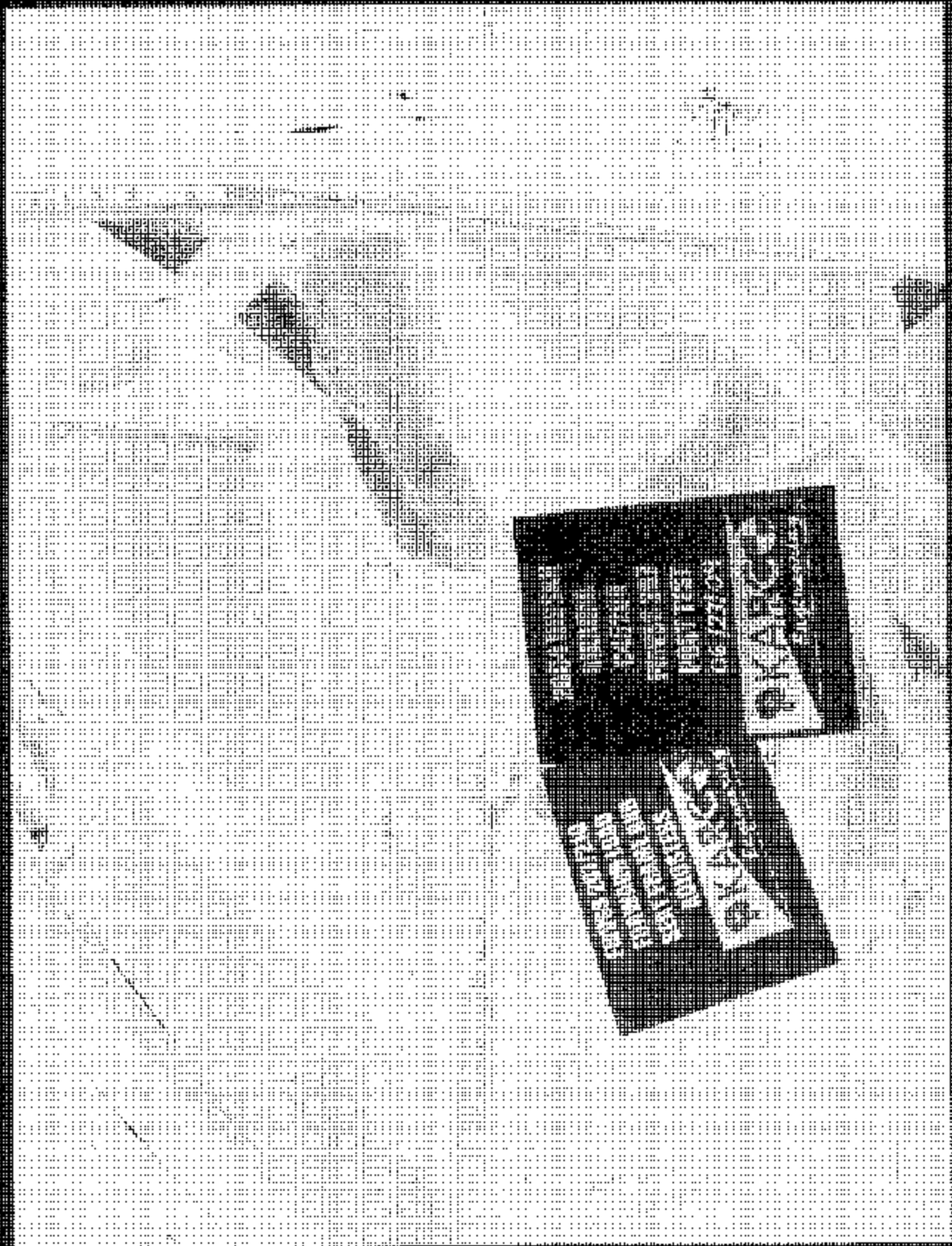


Figure A-24: 207/210 Forward Load on Seat Frame and Adjusters, Driver's Slide, Post-Test



Figure A-25: 2017/210 Forward Load on Seat Frame and Adjusters, Driver's Side, Pre-Test

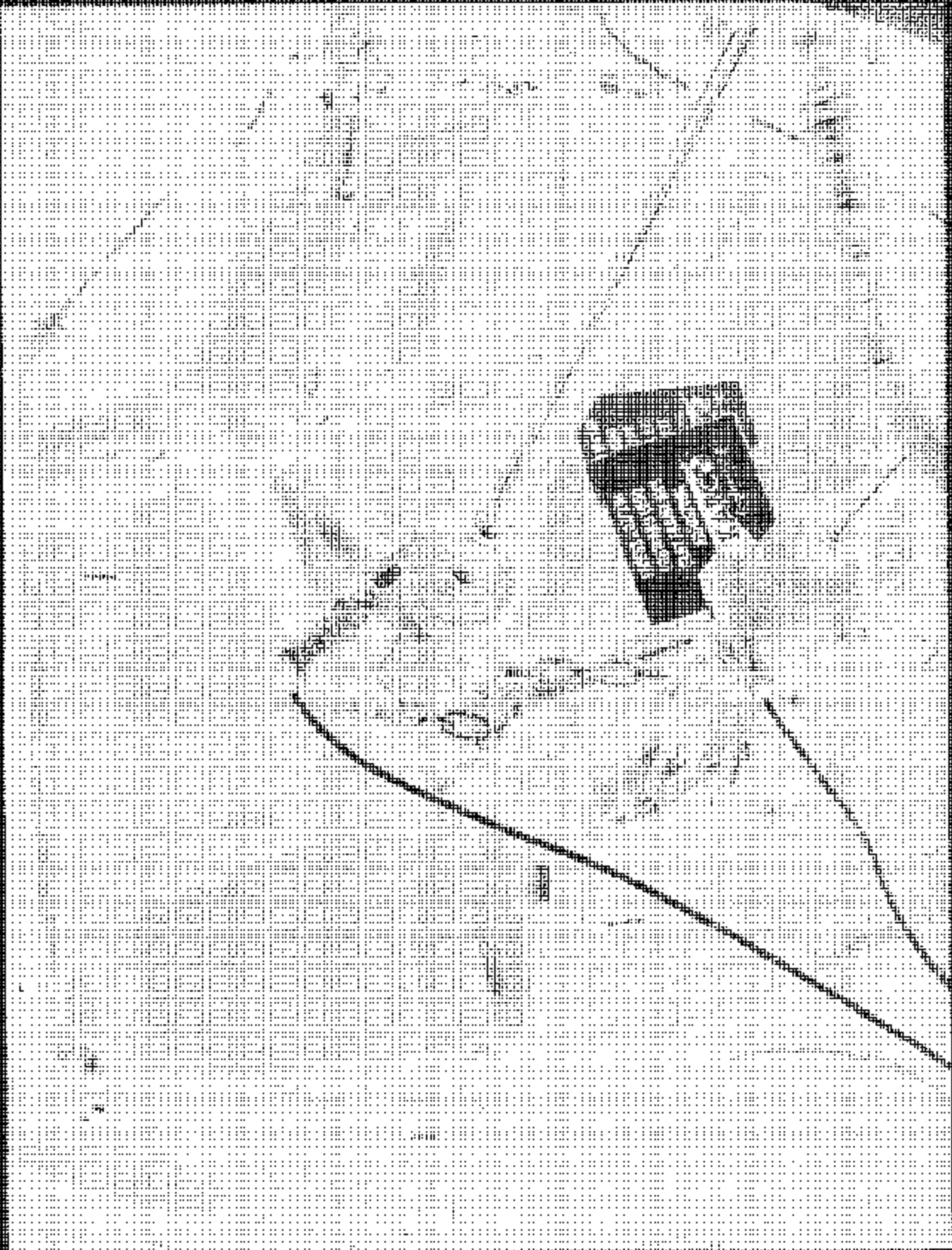


Figure A-26: 2007 Acura Integra, Driver's Side, Post-Yes:

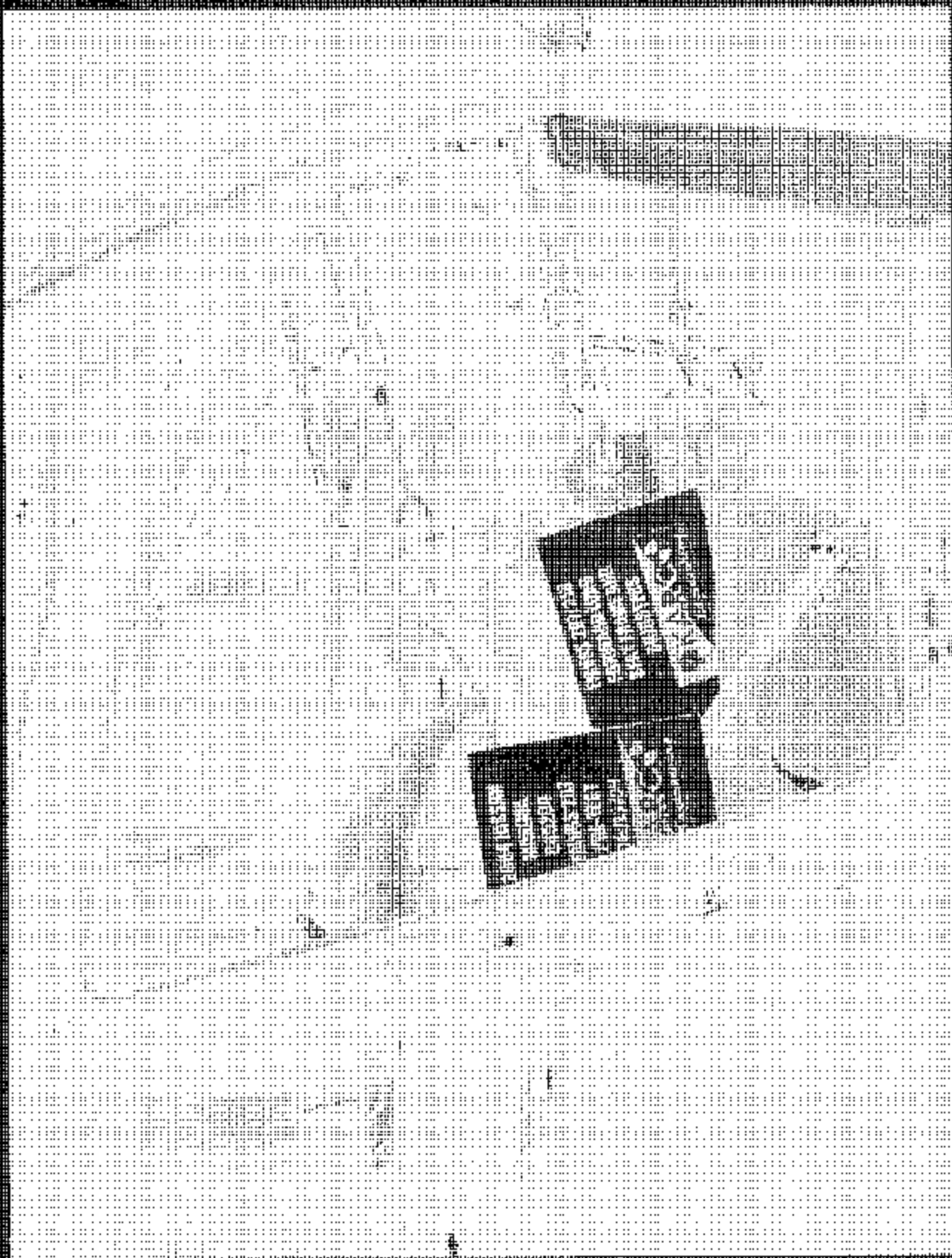


Figure A-27: 207/210 Forward Load on Seat Frame and Adjusters, Passenger's Skirt, Pro-Test

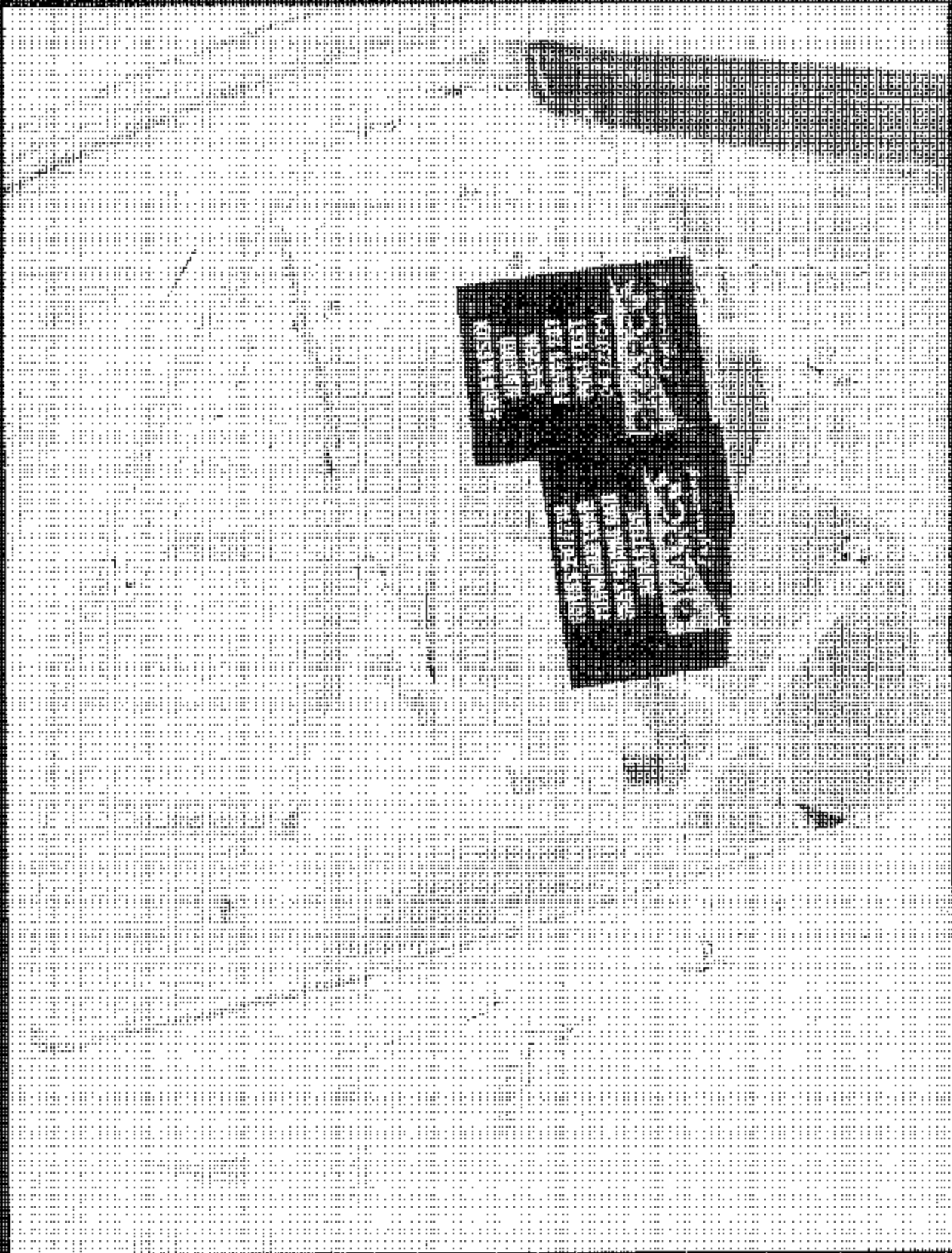


Figure A-28: 207210 Forward Load on Ship Frame and Adjuster, Passenger Side, Post-Test

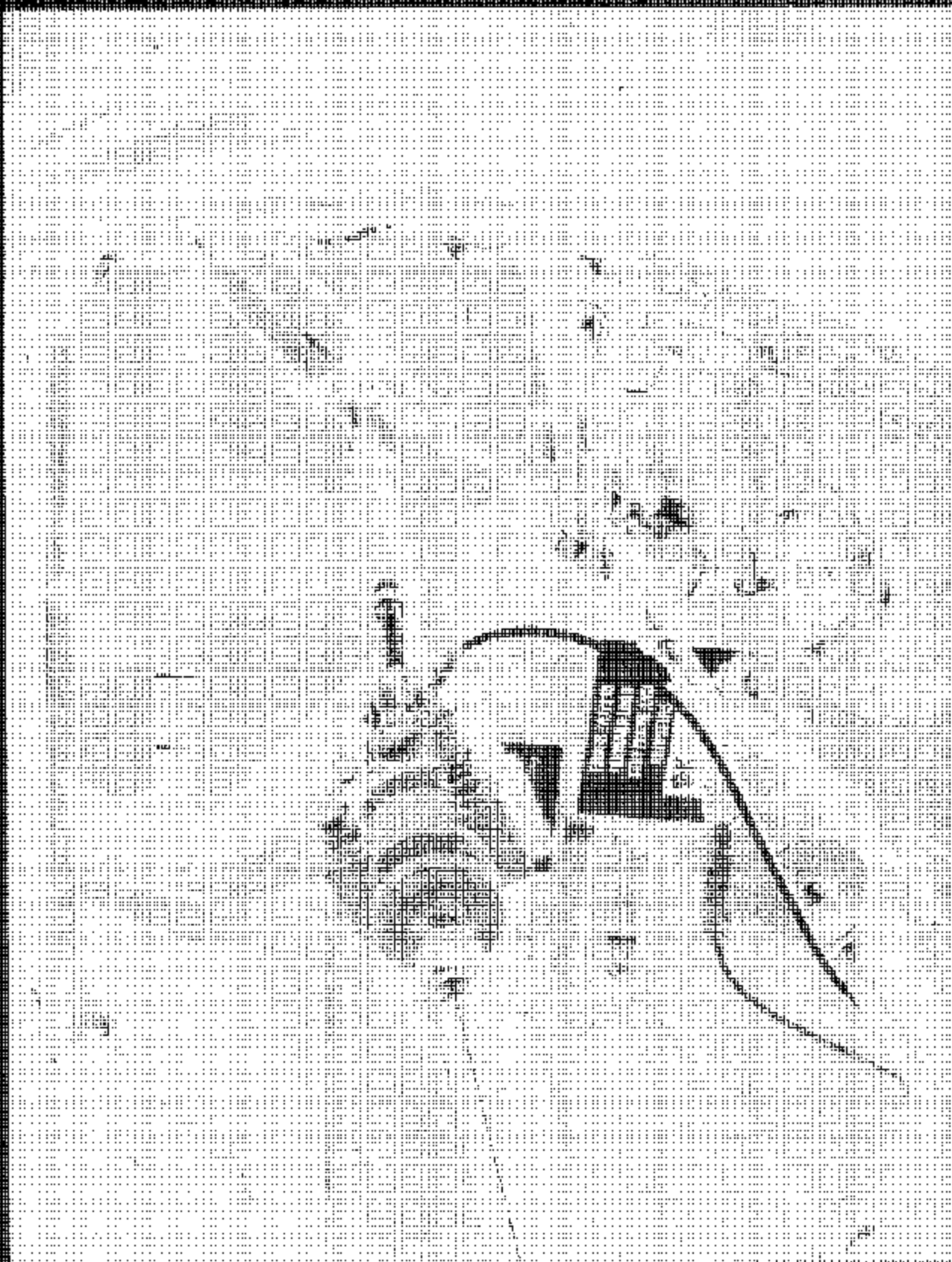


FIGURE A-25 207/210 Forward Load on Seat Frame and Adjusters, Passenger's Side, Pre-Test

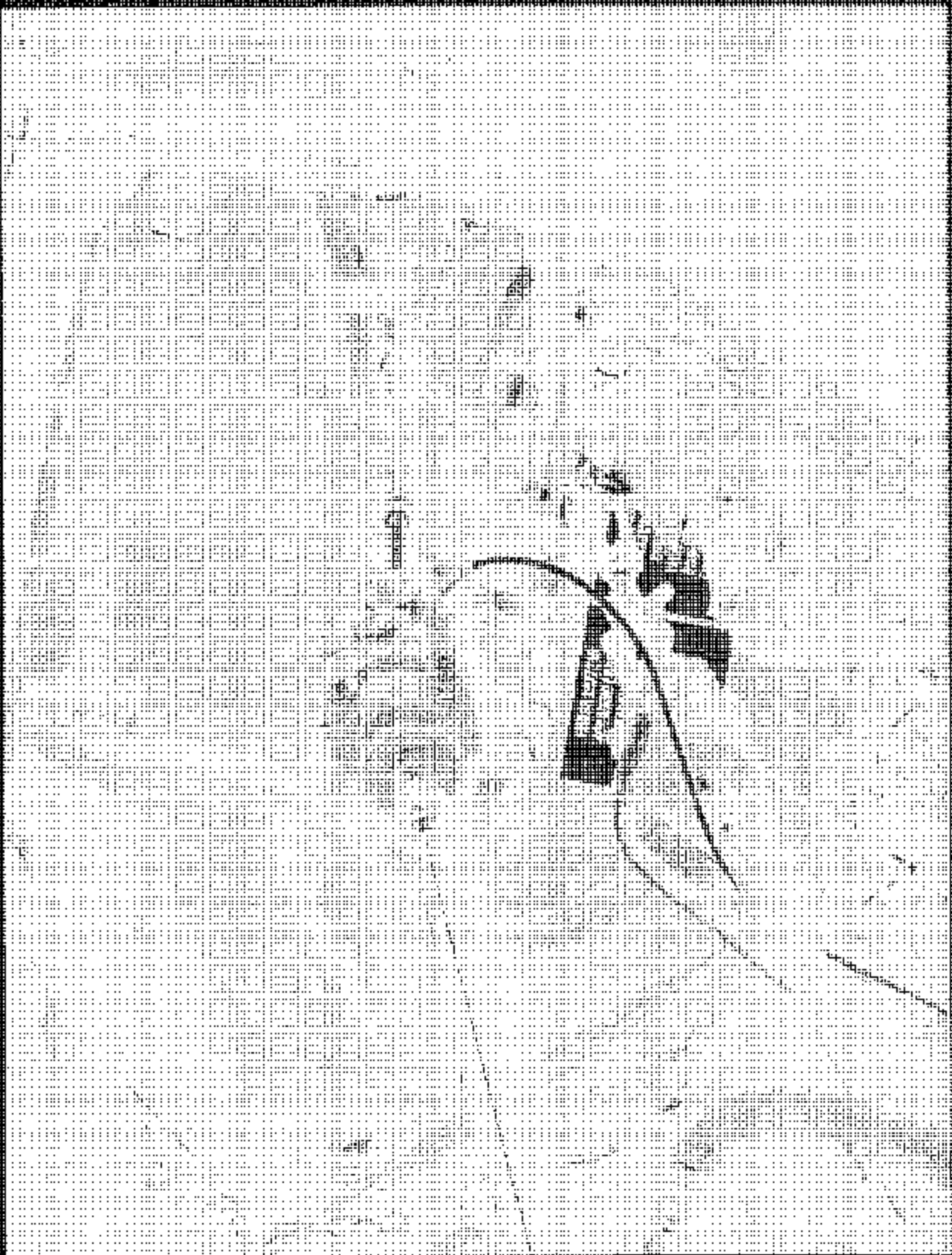


Figure A-30: 207/210 Forward Load on Seal Frame and Adjustment, Passenger's Side, Post-Test

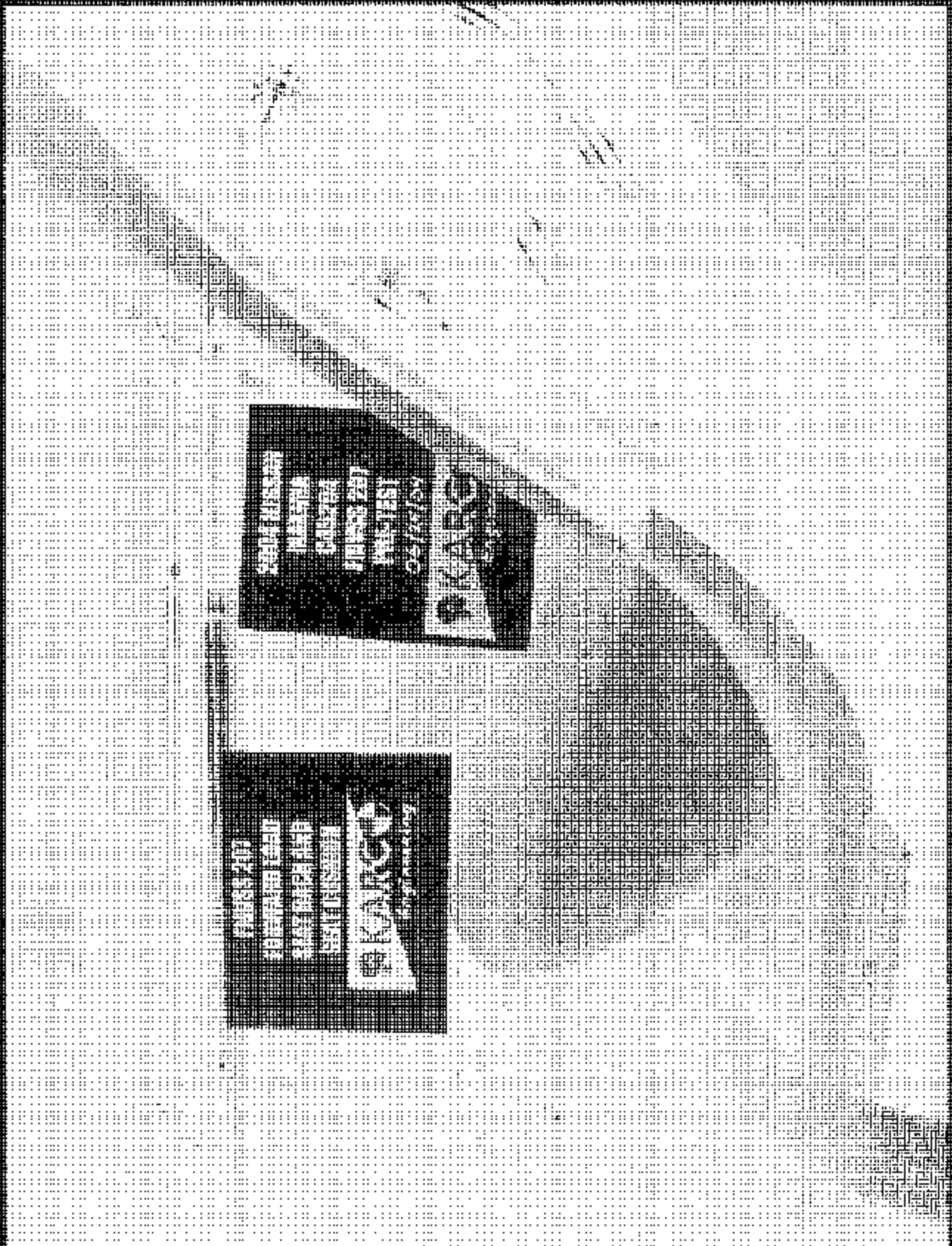


Figure A-31. Forward Load on Seat Back and Seat Cushion, Driver's Side Rear, Pre-Test

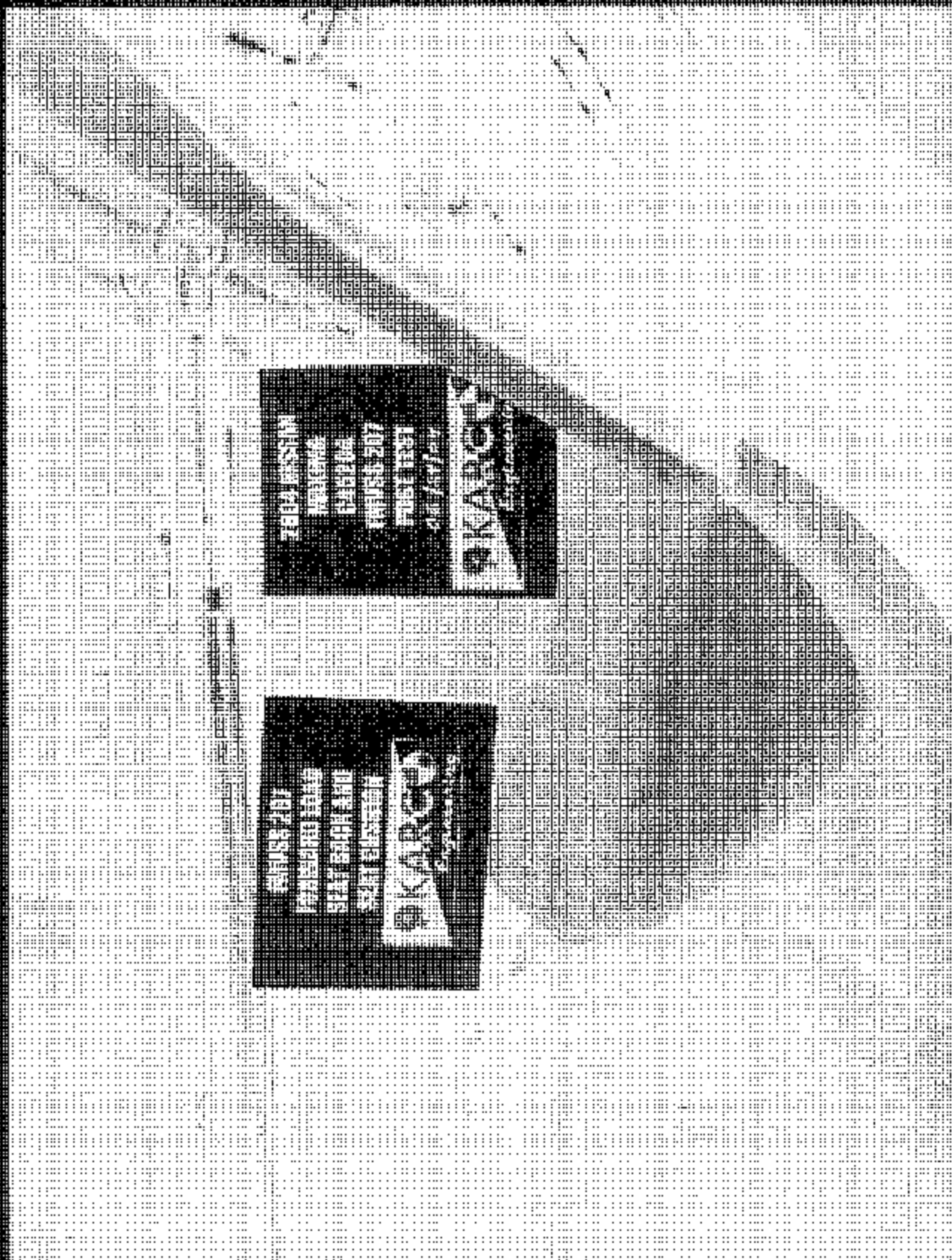


Figure A-52: Forward Fold on Seat Back and Seat Cushion, Drivers Side Rear, Post Test

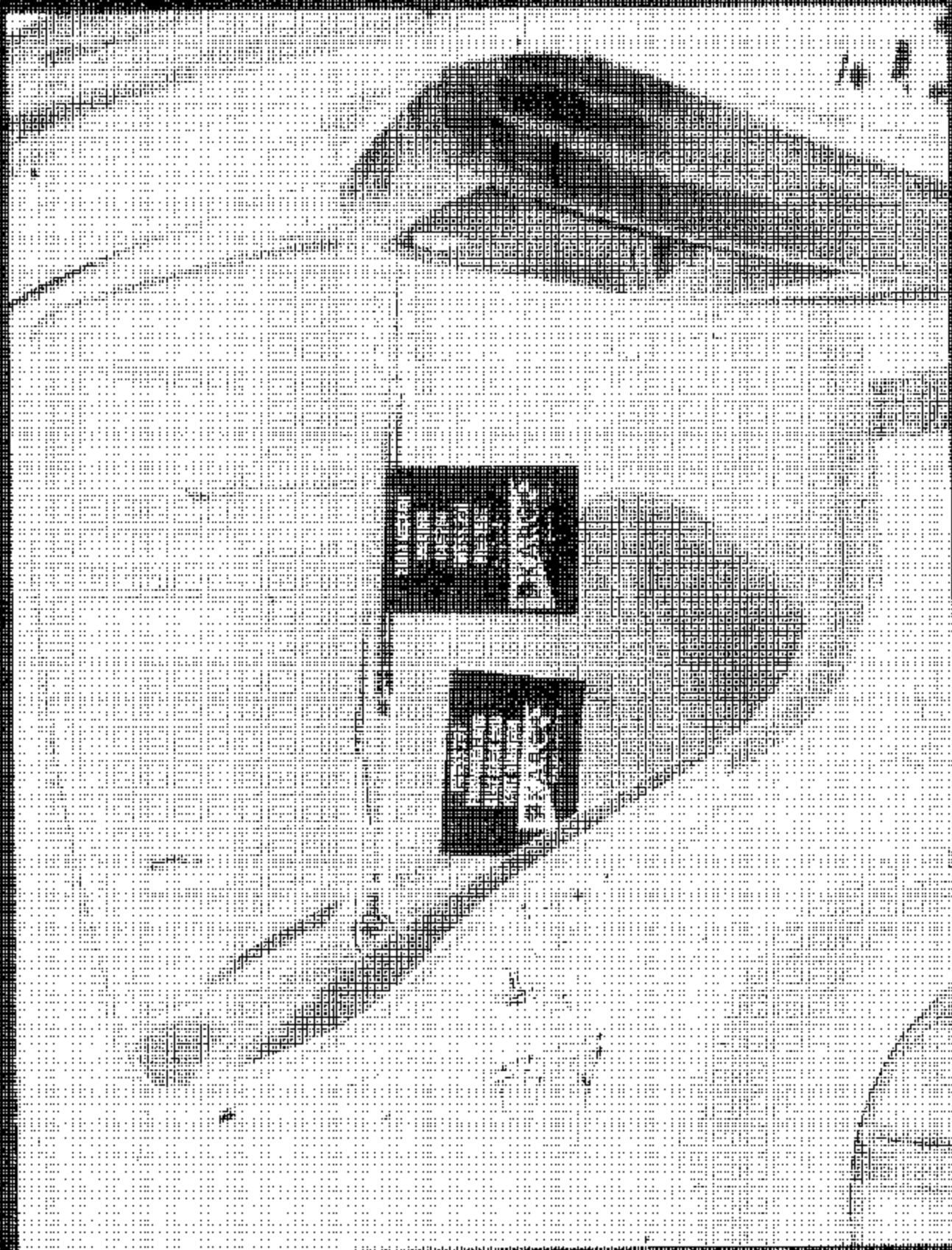


Figure A-33 Forward Load on Seat Pack and Seat Cushion, Passenger's Side Red, Pre-Tusk



Figure A-34 Forward Load on Seat Back and Seat Cushion, Passenger's Side Roof Post Test



Figure A-35: Floor Pan Anchors, Left Floor Pan Overall, Pre-Fest

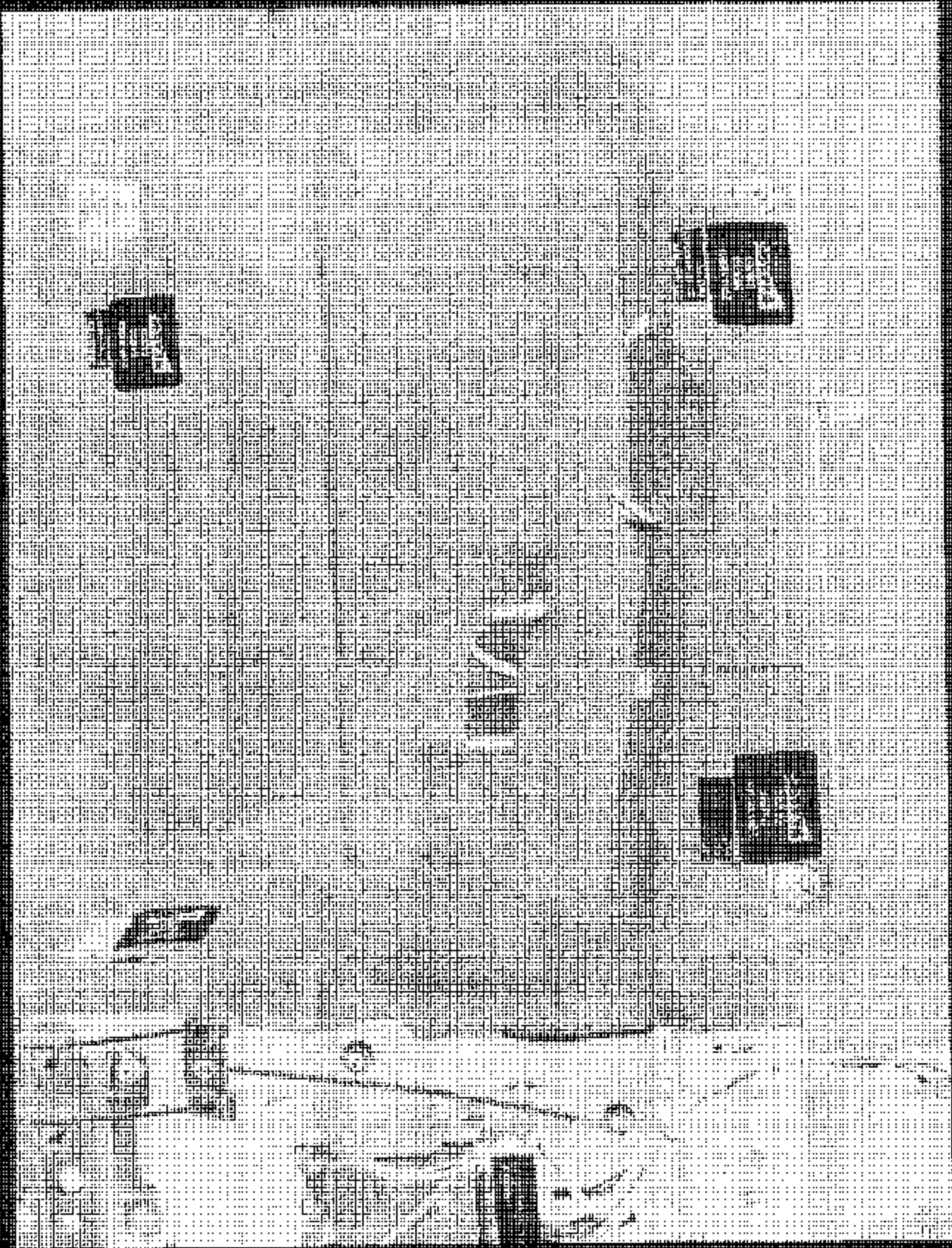


Figure A-36. Floor Plan Architecture. Left Front Seat Overlaid, Post-Test

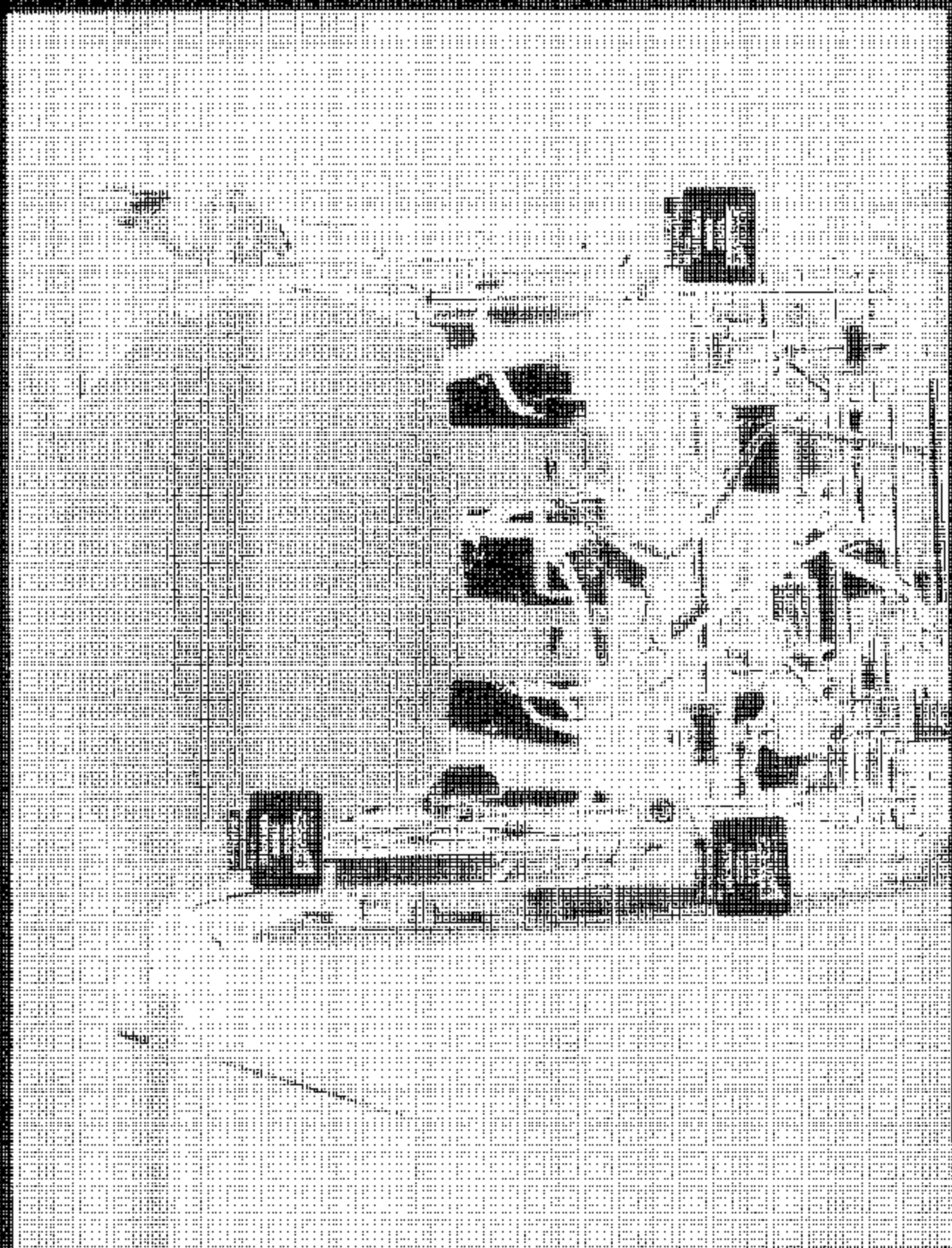


Figure A-37: Seam Anchors, Led Front Seat Overall, Pig-Tail

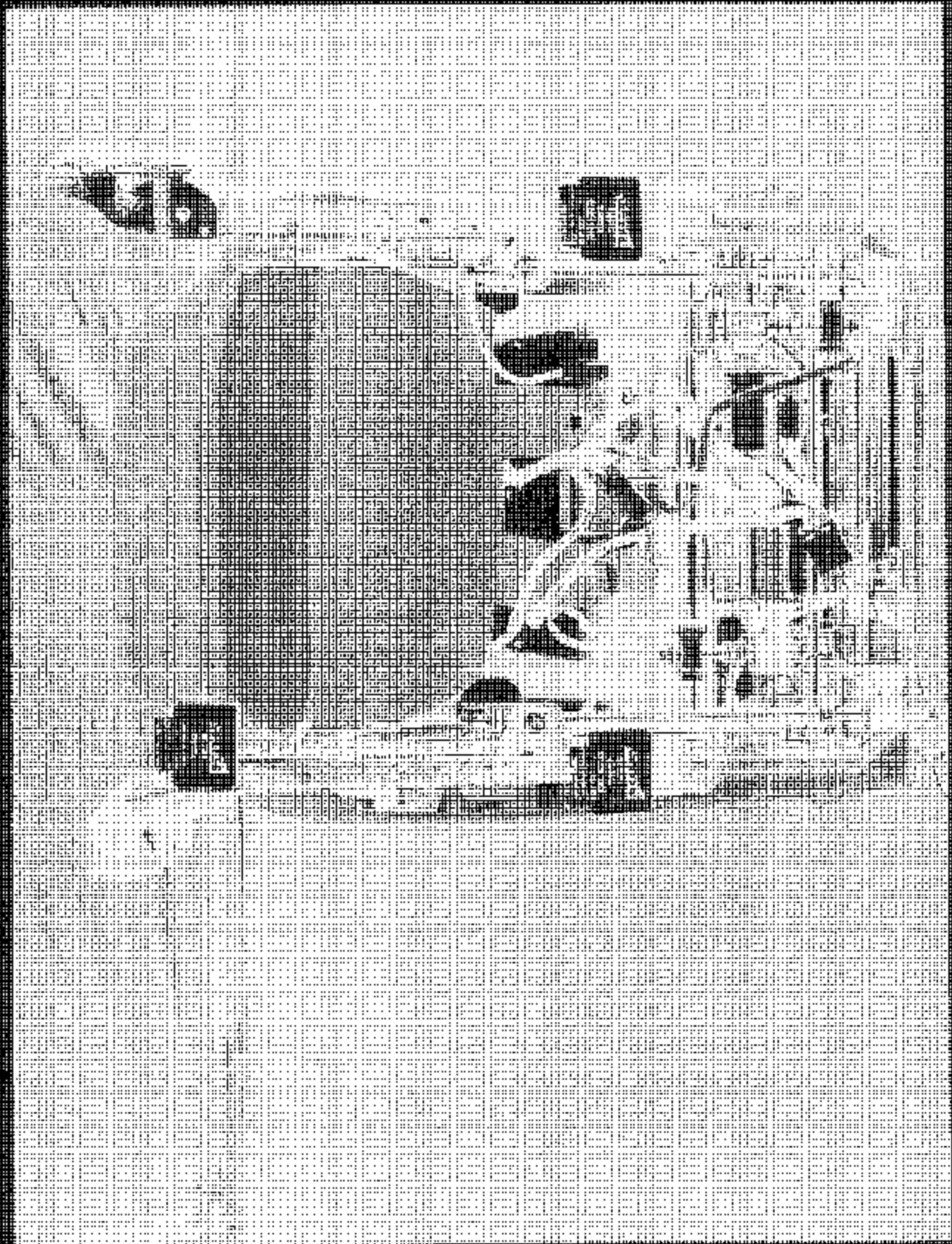


Figure A-33. Seat Anchors, Left Front Seat Overall, Post-Test

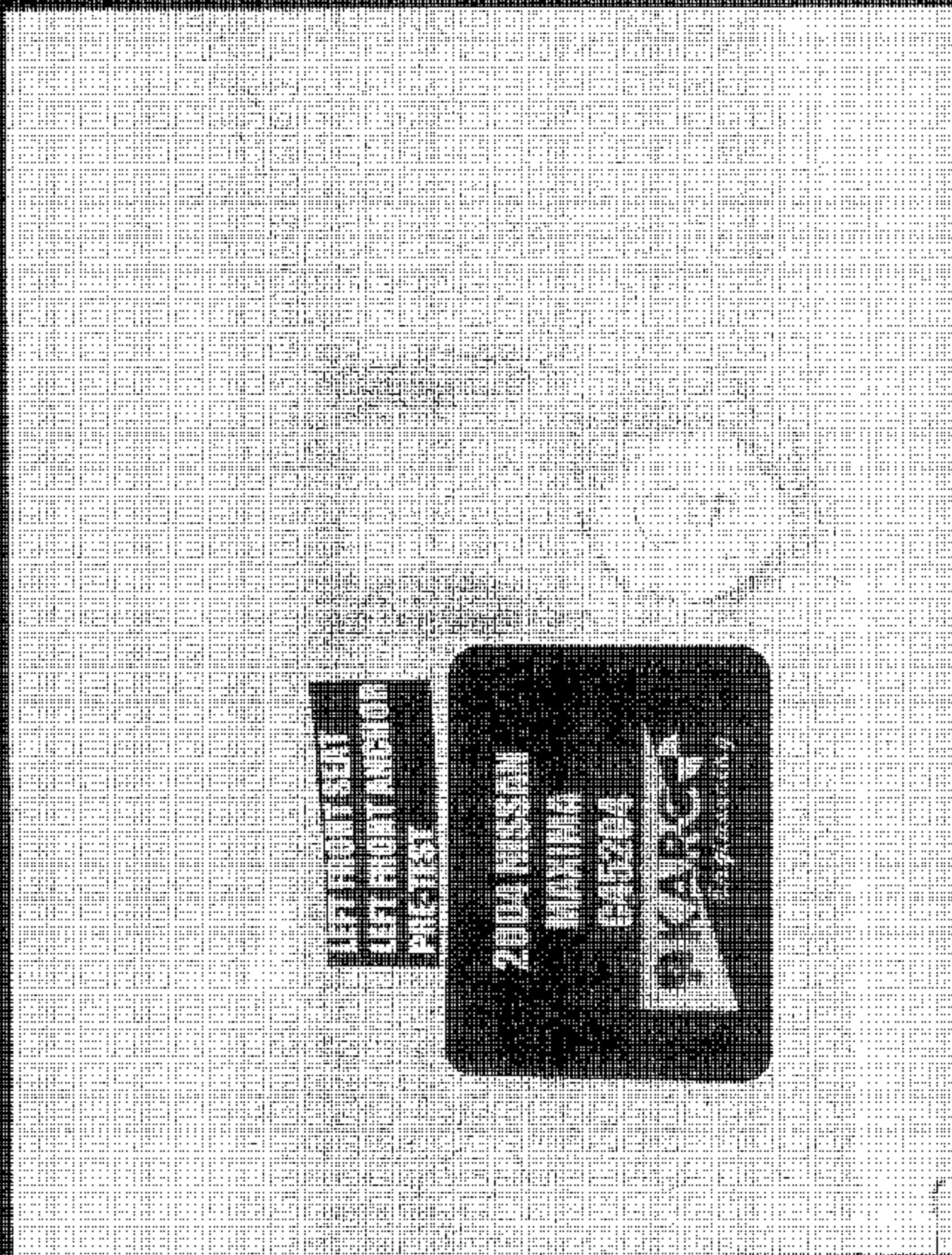


Figure A-32: Floor Pan Anchor, Left Front Side, Pre-Test

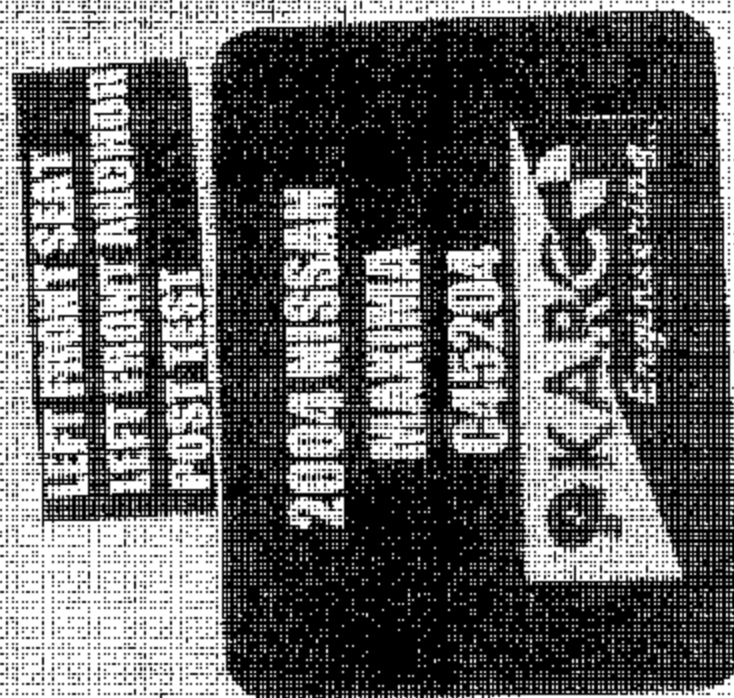


Figure A-40: Floor Pan Anchor, Left Front Seal, Post-Test

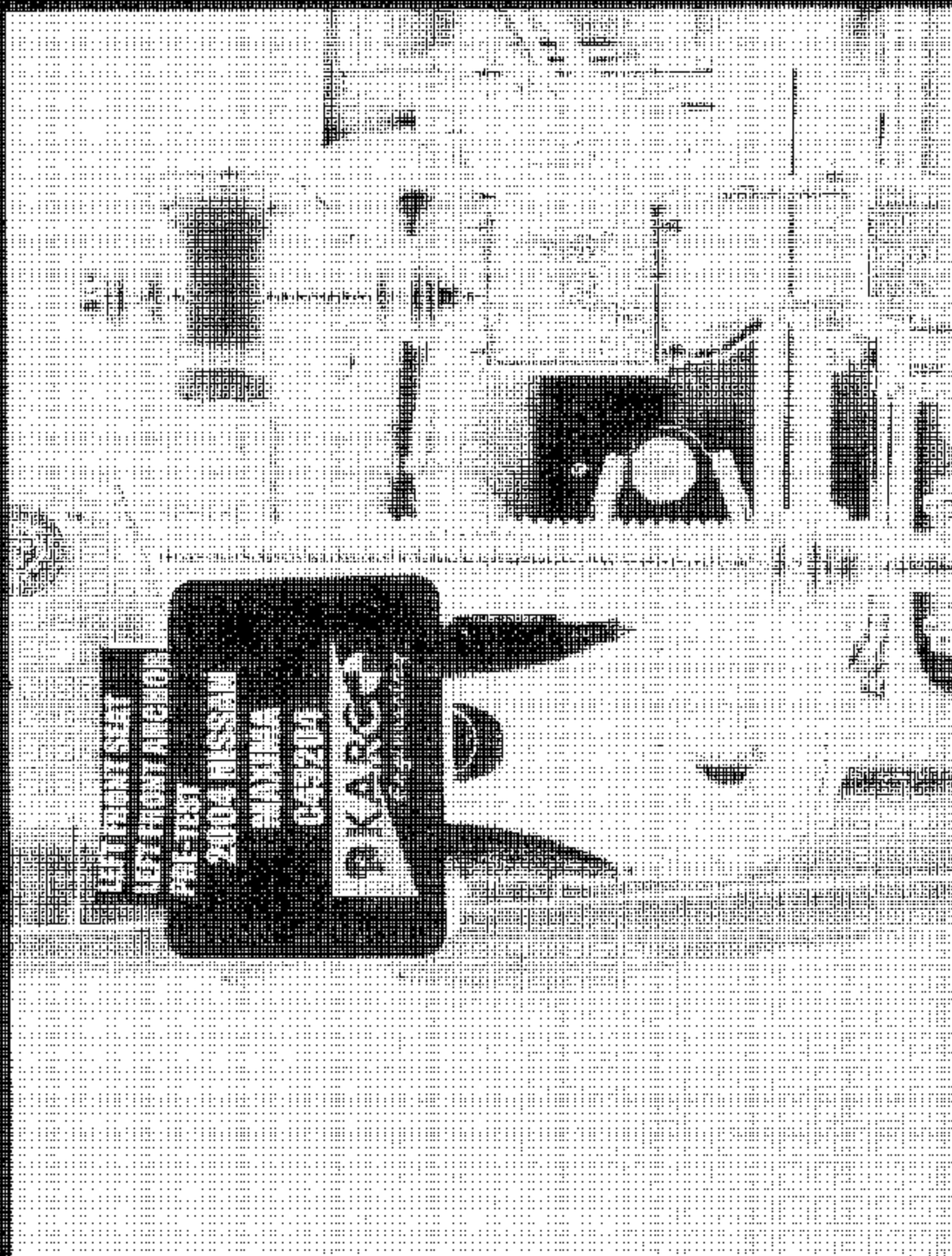


Figure A-41. Seat Anticlog Left Front Seat, Pre-Test

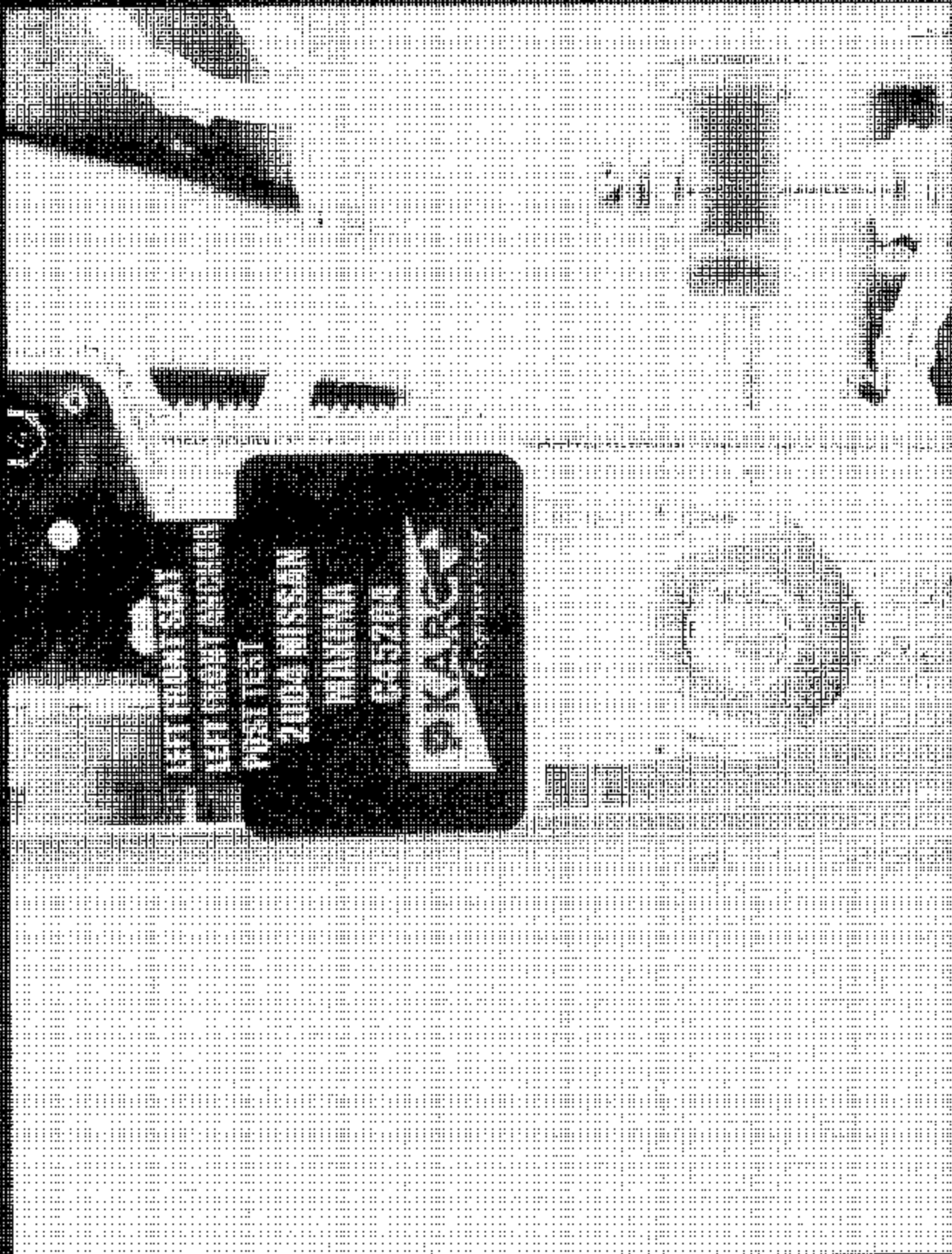


Figure A-42: Seat Anchor, Left Front Seat, Post Test

LEFT FRONT SEAT
RIGHT FRONT ANCHOR
POST TEST

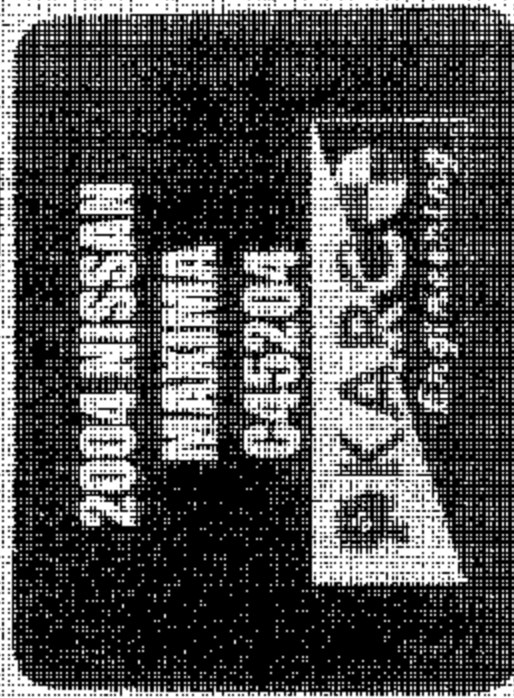


Figure A-44: Floor Pan Anchor Left Front Seat, Post-Test



Figure A-45: Seat Anchor, Left Front Seat, Pre-Test

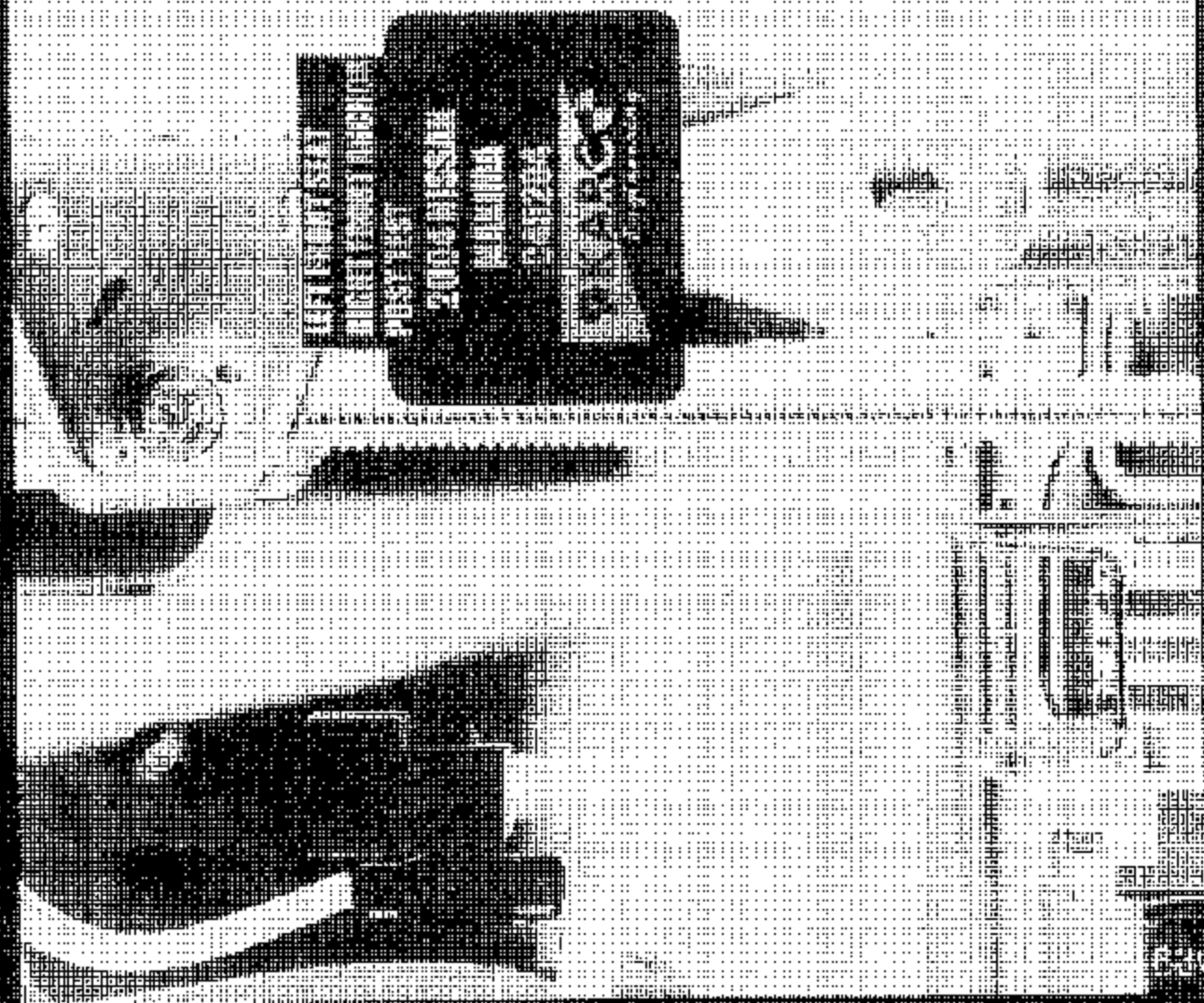


Figure A-43. Spit Anchor, Left Front Seat Post Test

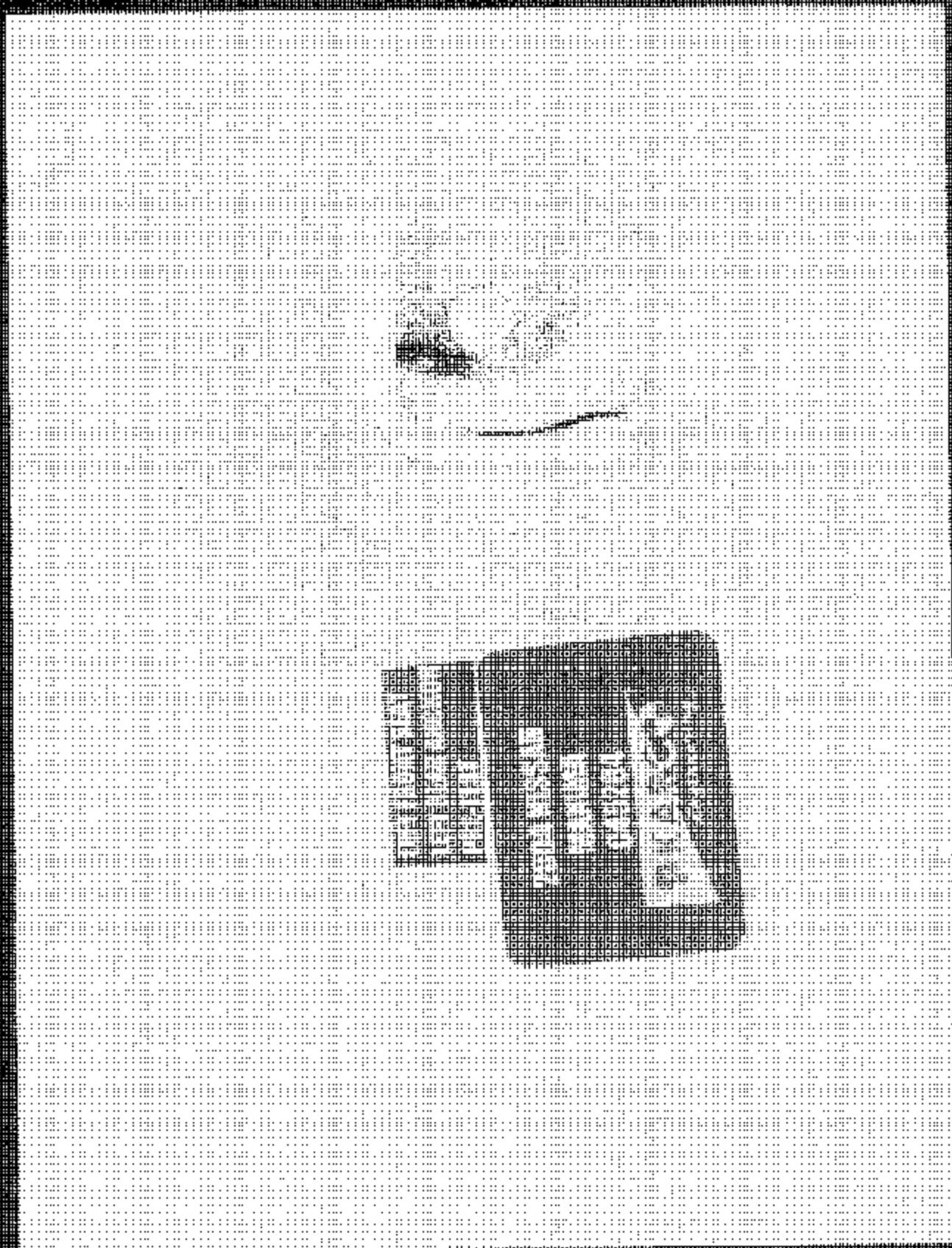


Figure A-47, Floor Pan Anchor, Left Front Seal, Pre-Test

LETTERMARKS
LETTERMARKS
LETTERMARKS

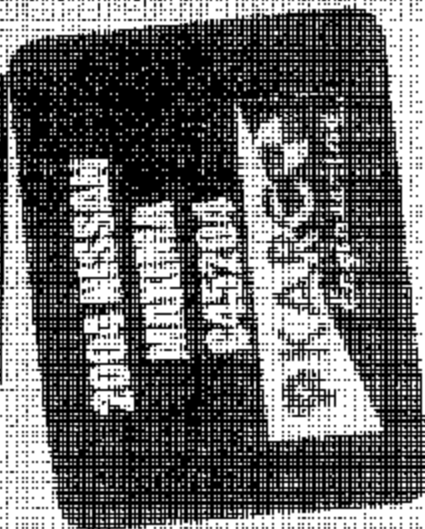


Figure A-48: Floor Pan Anchor, Left Front Seal Post Test

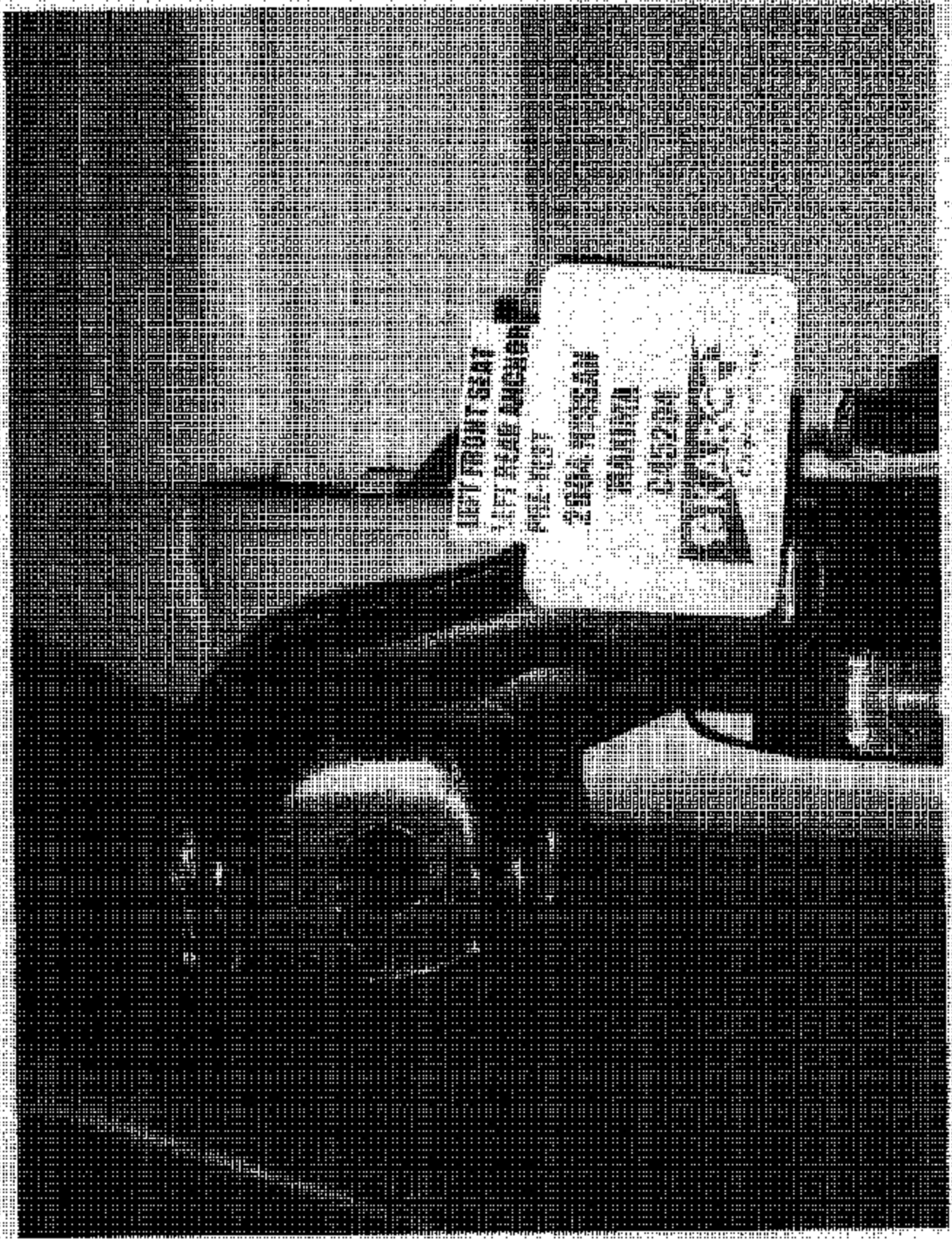


Figure A-49: Seat Anchor, Left Front Seat, Pre-Test

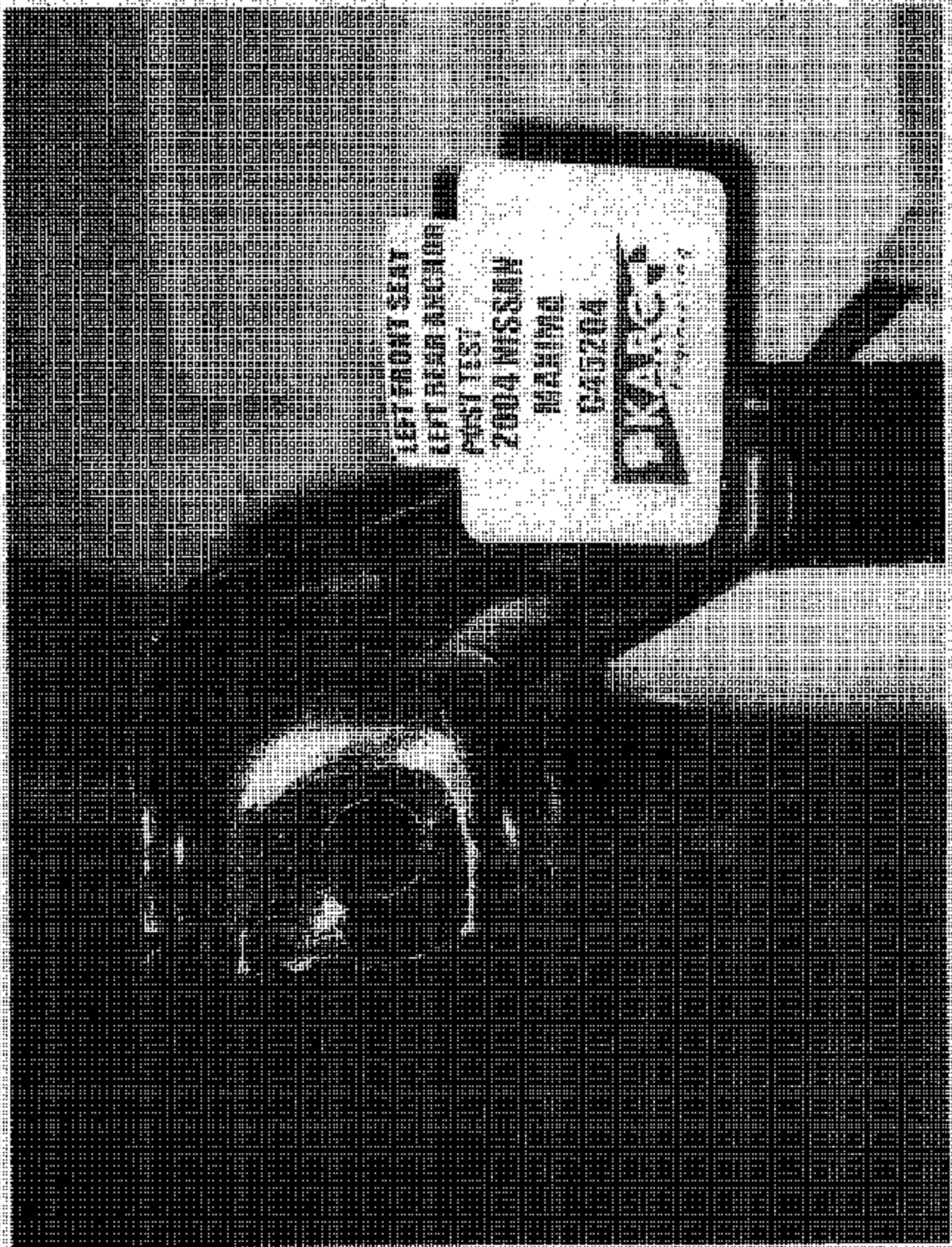


Figure A-50: Seat Anchor, Left Front Seat, Post-Test

LEFT FRONT SEAT
RIGHT FRONT ANCHOR
PRE-TEST



Figure A-51: Floor Pan Anchor, Left Front Seat, Pre-Test

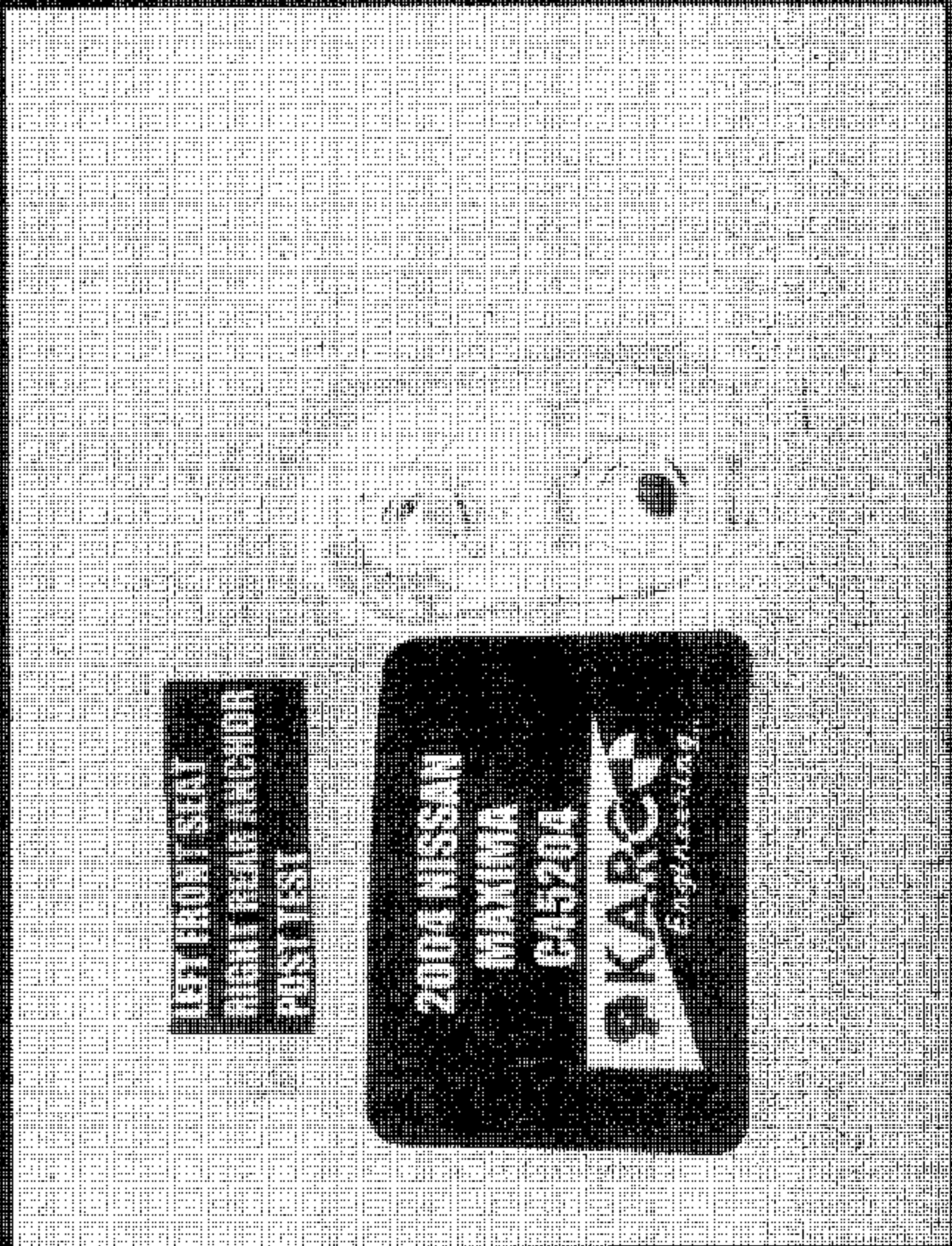


Figure A-52: Floor Pan Anchor, Left Front Seat, Model Year

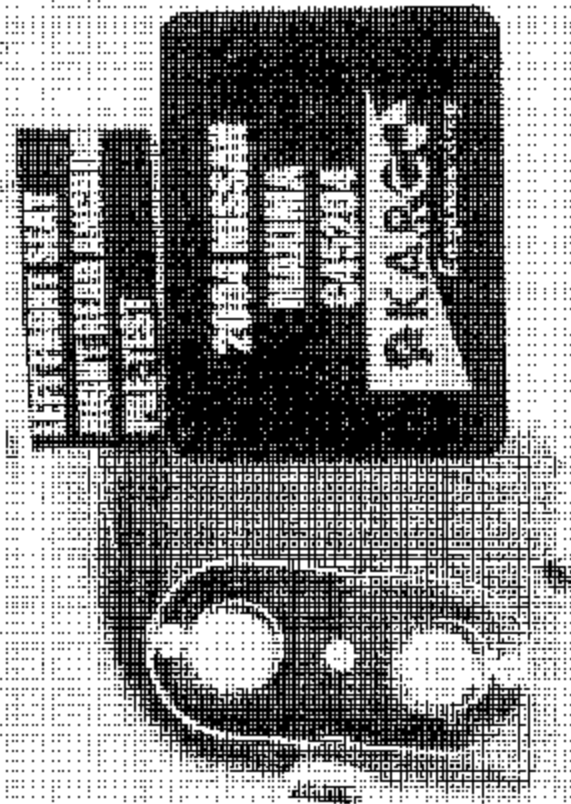
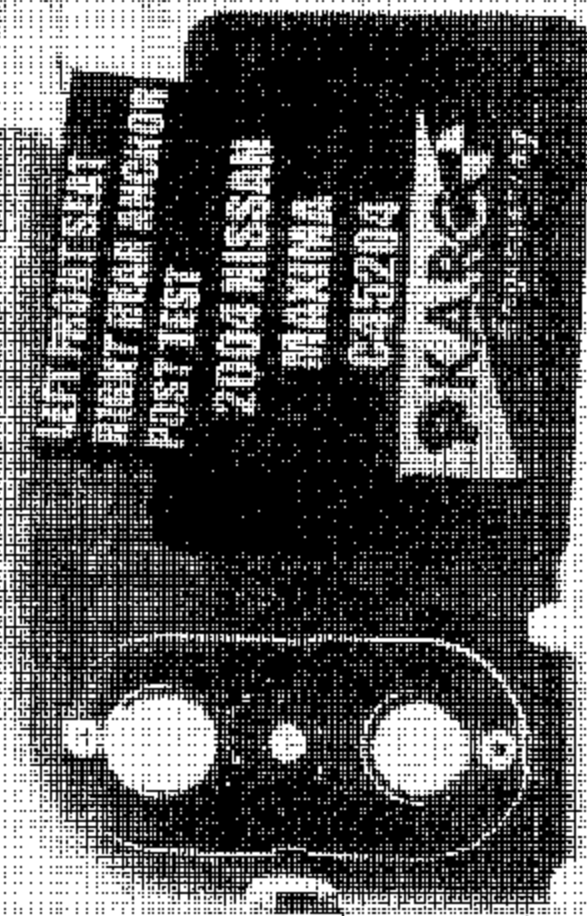


Figure A-43. Seat Anchor, Left Front Seat, Pre-Test



Figures A-3a: Seal Anchor, Left Front Seat, Post-Test

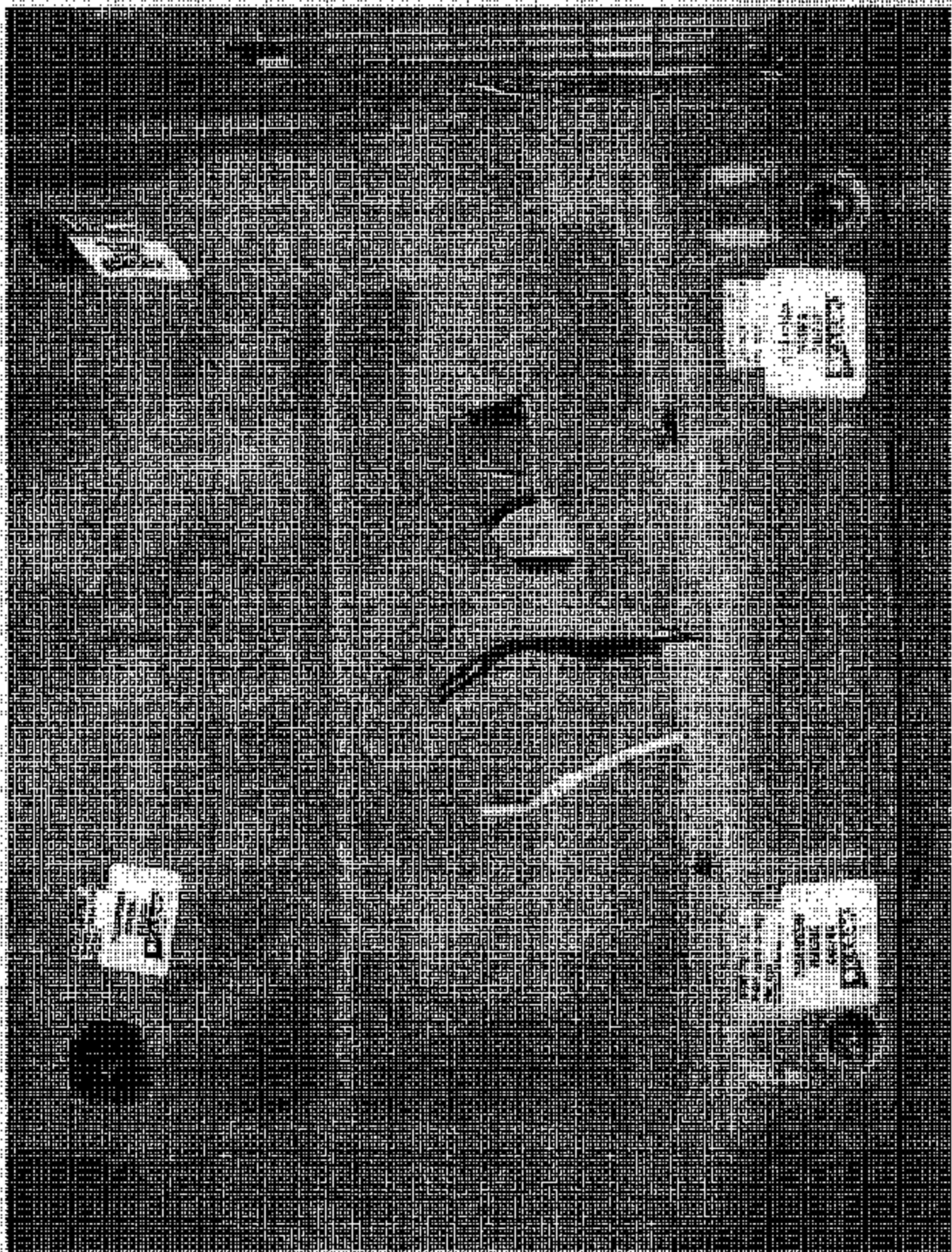


Figure A-55. Floor Pad Anchors, Right Front Slab Overall, Pre-Test

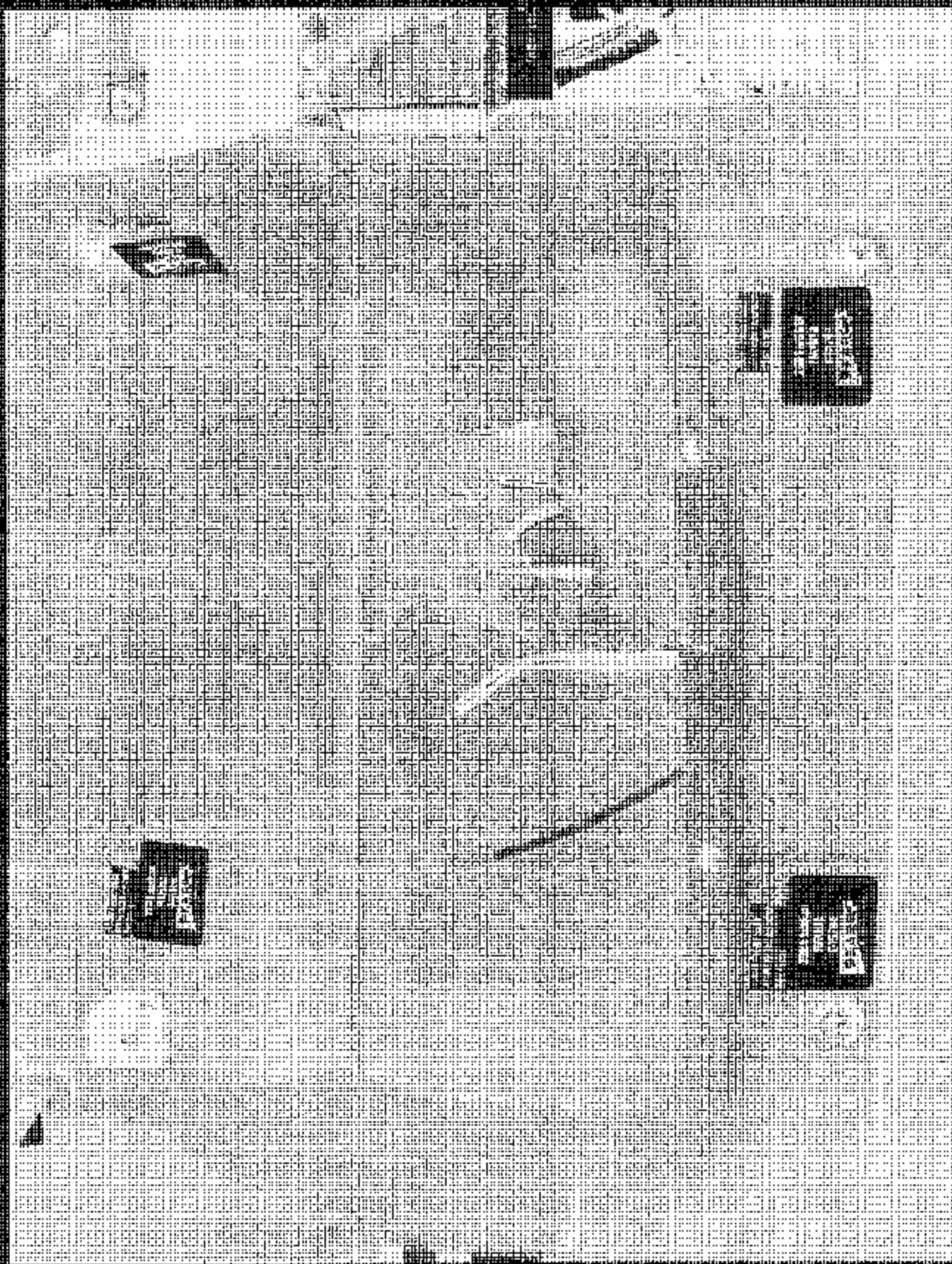


Figure A-56: Four Pan Anchors, Right Front Seat Overall, Post-Test

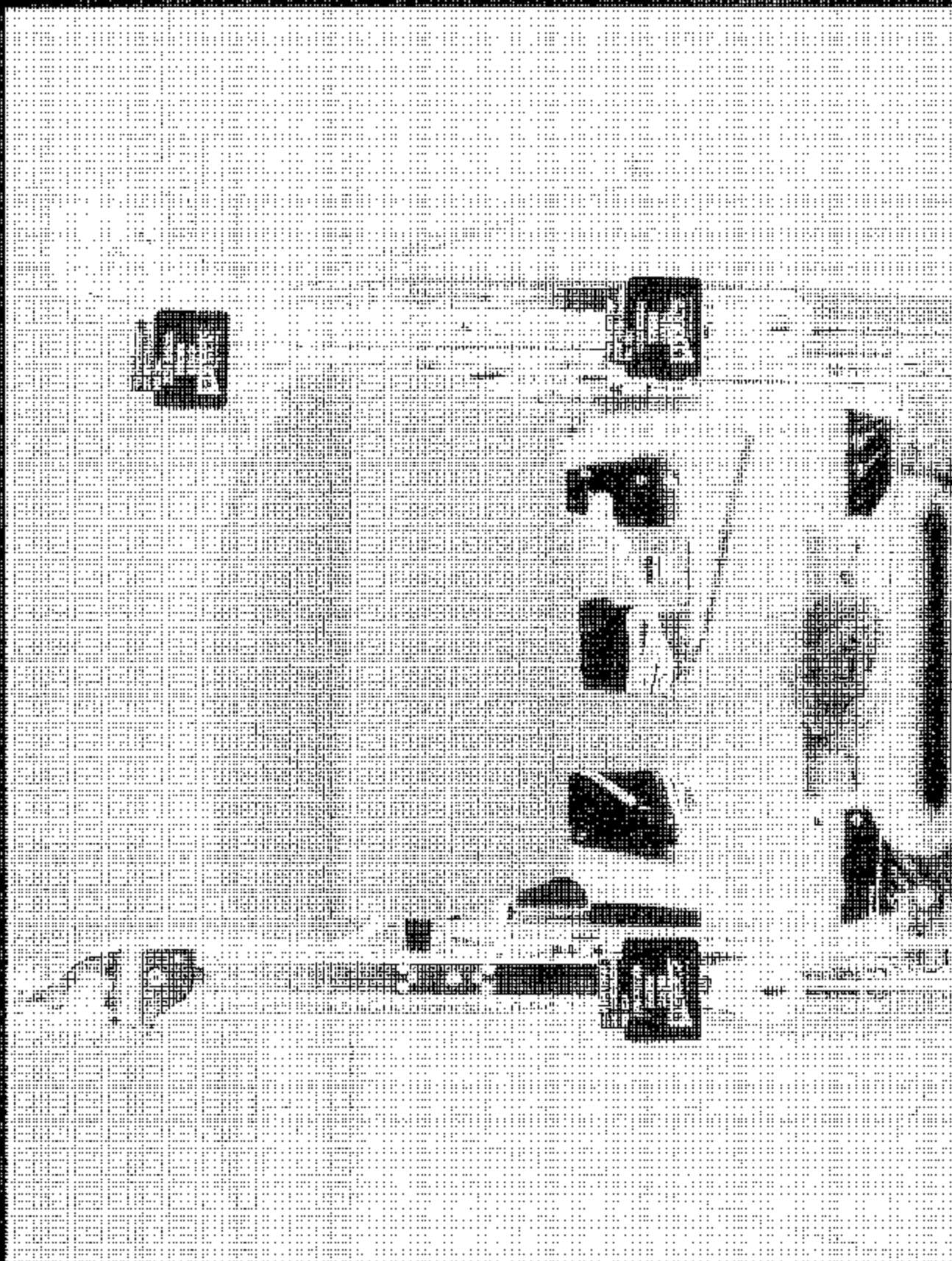


Figure A-57: Seat Anchors, Right Front Seat Overall, Pre-Test

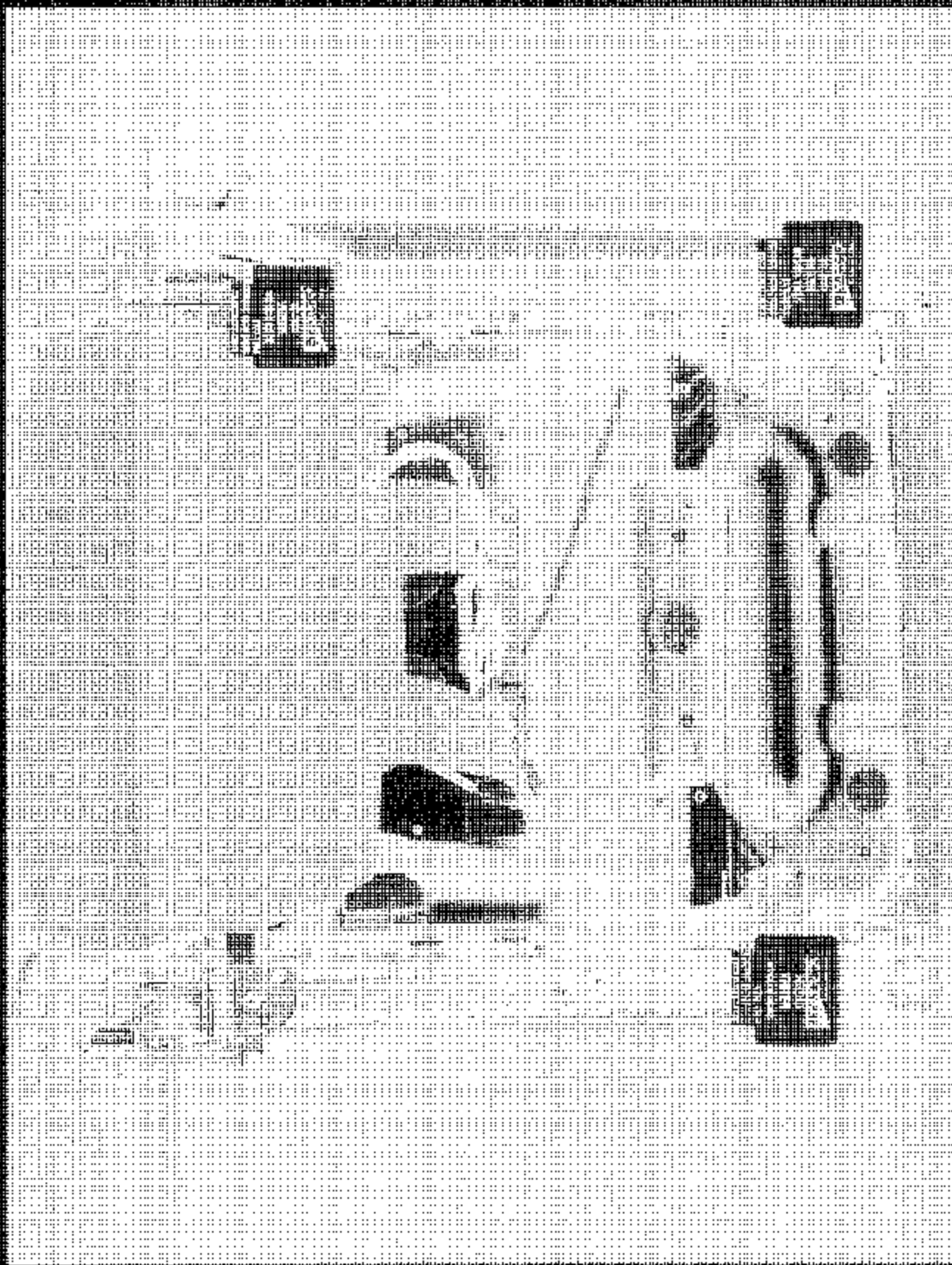


Figure A-58: Seat Andromeda, Right Front Seat Overall, Post-Test

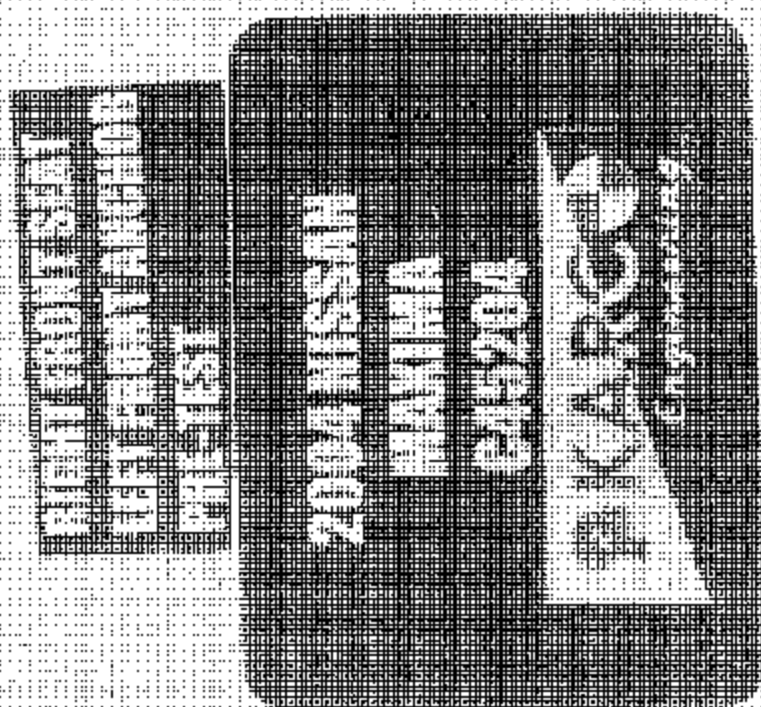


Figure A-53. Floor Pan Anchor, Right Front Seat, Pre-Test

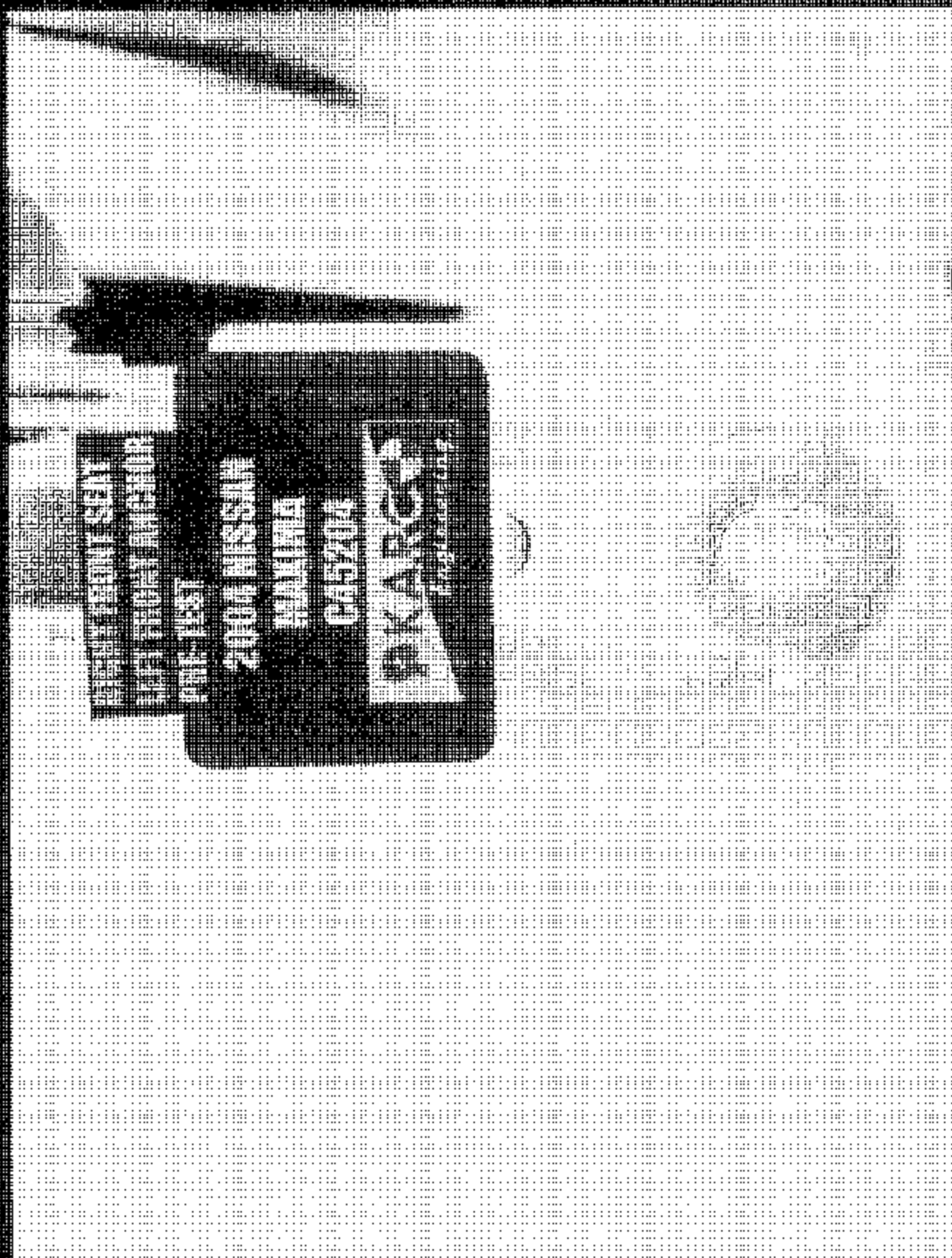


Figure A-01: Seat Archer, Right Front Seat, Pre-Test

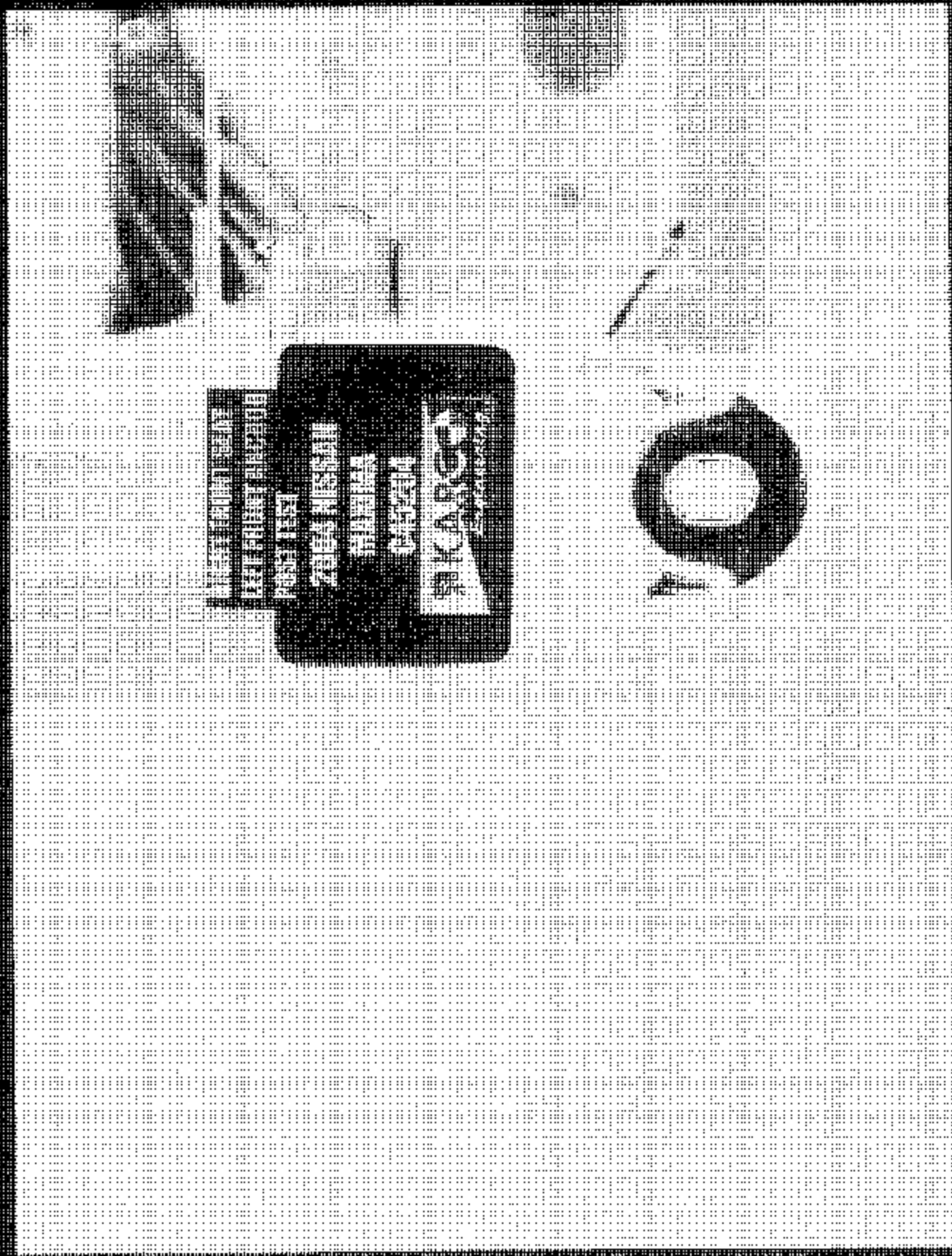


Figure A-62: Seat Anchor, Right Front Seat, Post Test

RIGHT FRONT SEAT
RIGHT FRONT ANCHOR
PRE-TEST

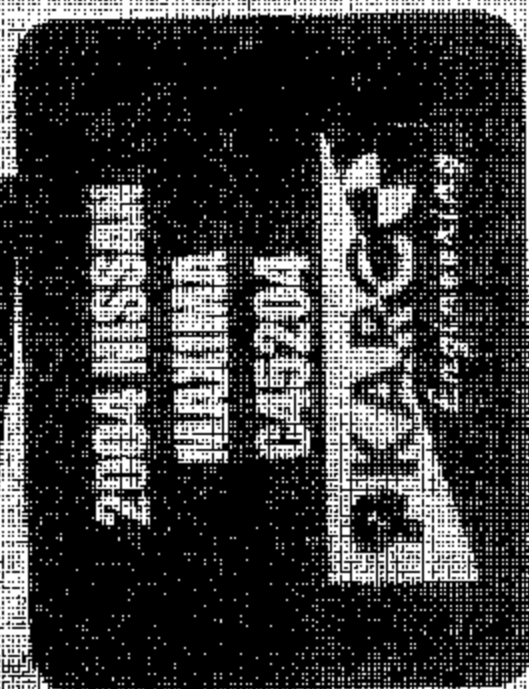


Figure A-83. Floor Plate Anchor, Right Front Seat, Pre-Test

RIGHT FRONT SEAL
RIGHT FRONT ANCHOR
POST TEST

2004 NISSAN

MAXIMA

045204



Figure A-64. Front Far Anchor, Right Front Seal, Post Test



Figure A-65. Seat Asides. Right Front Seat Pre-Test

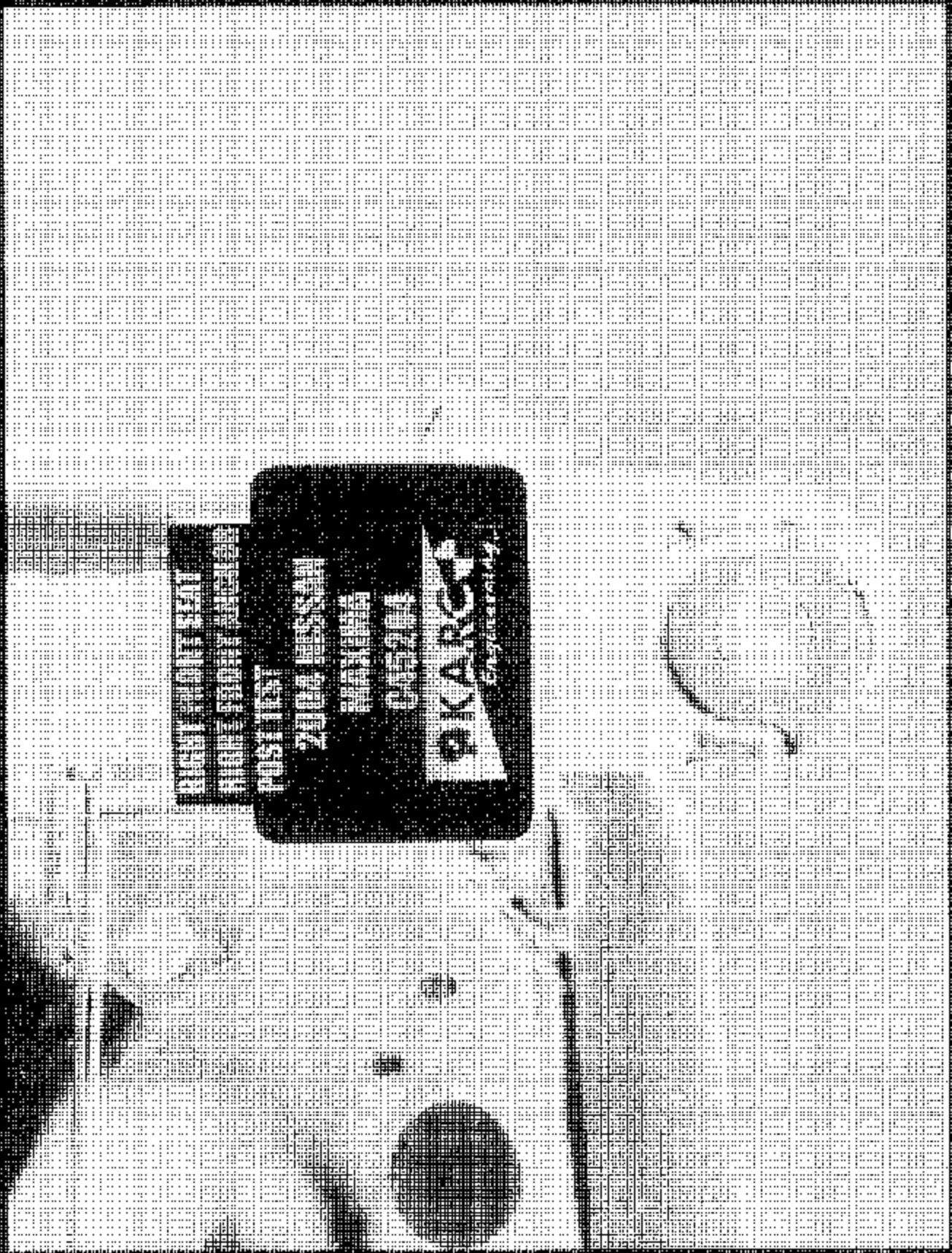


Figure A-66: Seat Anchor, Right Front Seat, Post-Test



Figure A-67: Front Left View, Right Front Seal, Pre-Test

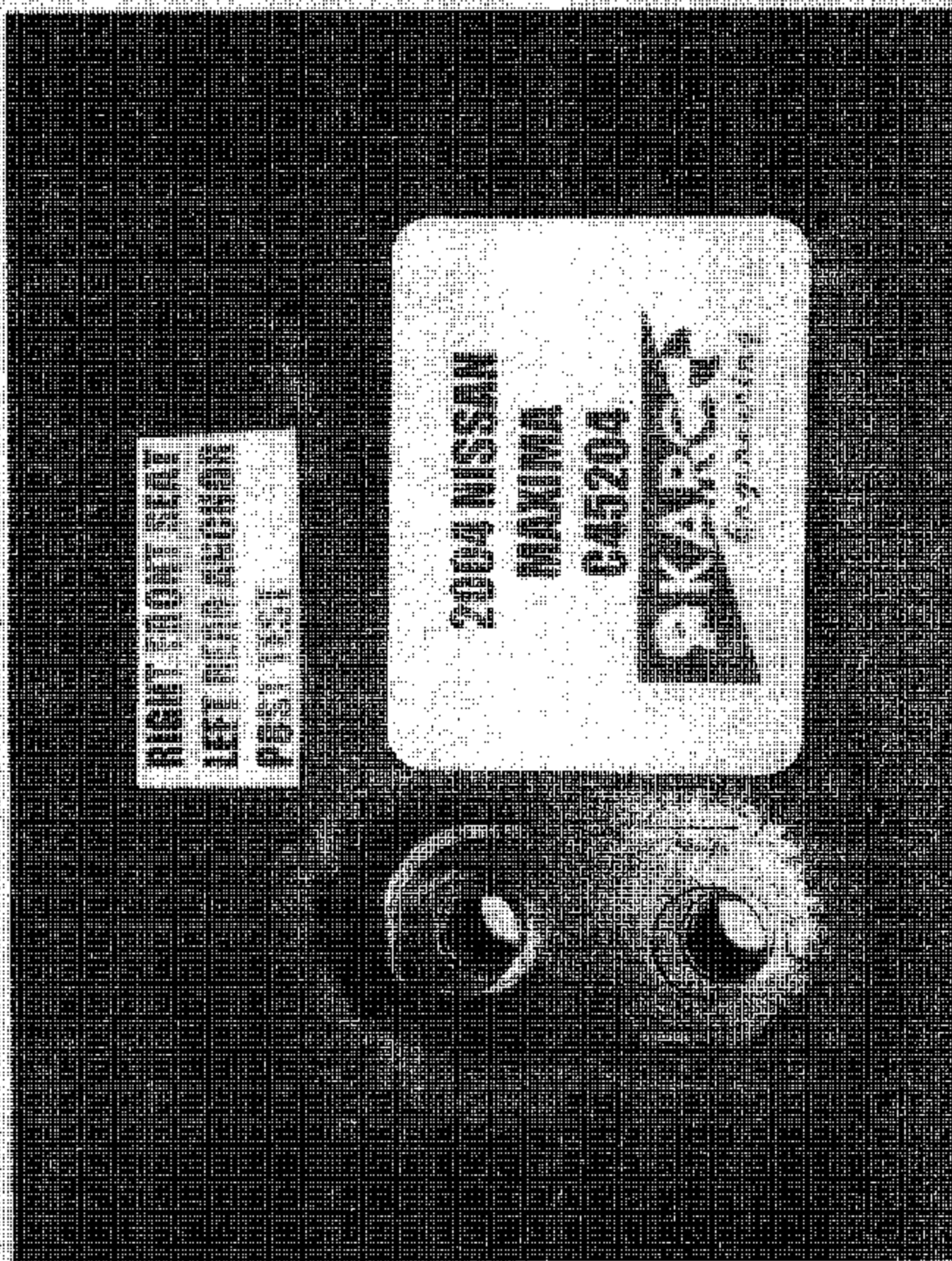


Figure A-55: Floor Pan Anterior, Right Front Seal, Post-105



Figure A-69 Seal Anchor, Right Front Seal, Pie-Test

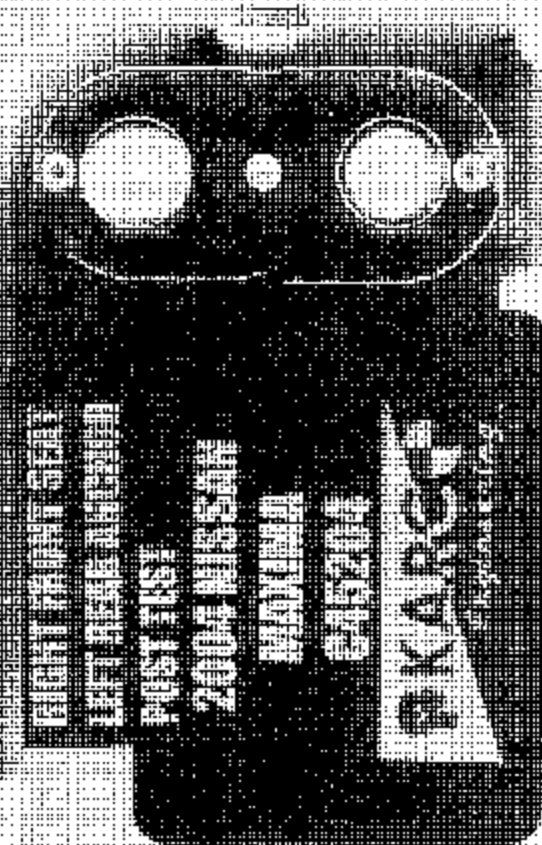


Figure A-10. Seal Archer, Right Front: Seal Post Test



FIGURE A-71: Foot Rest Anchor, Right Foot Seat, Pre-Test

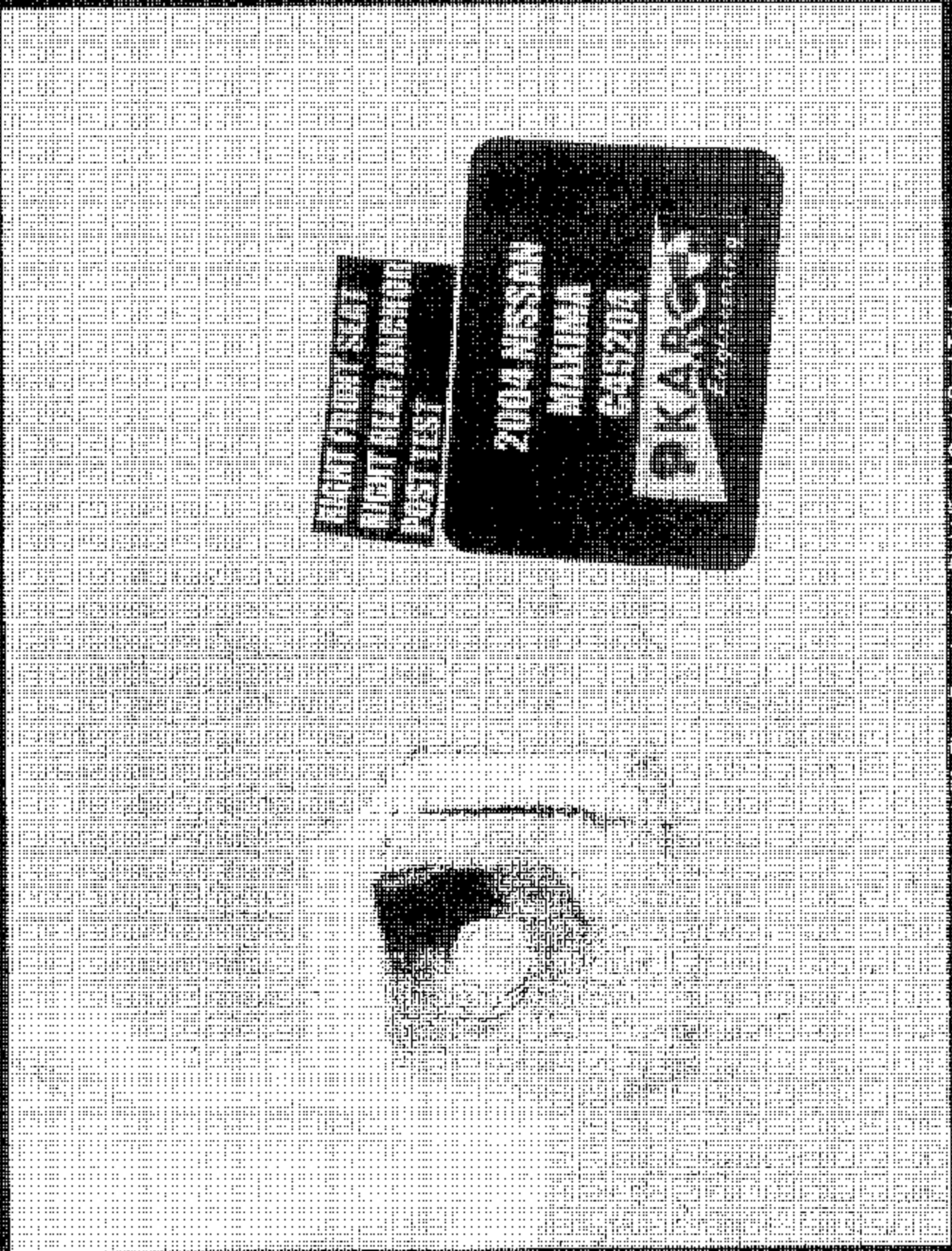


Figure A-72: Floor Pan Anchor, Right Friel Seal Post Test

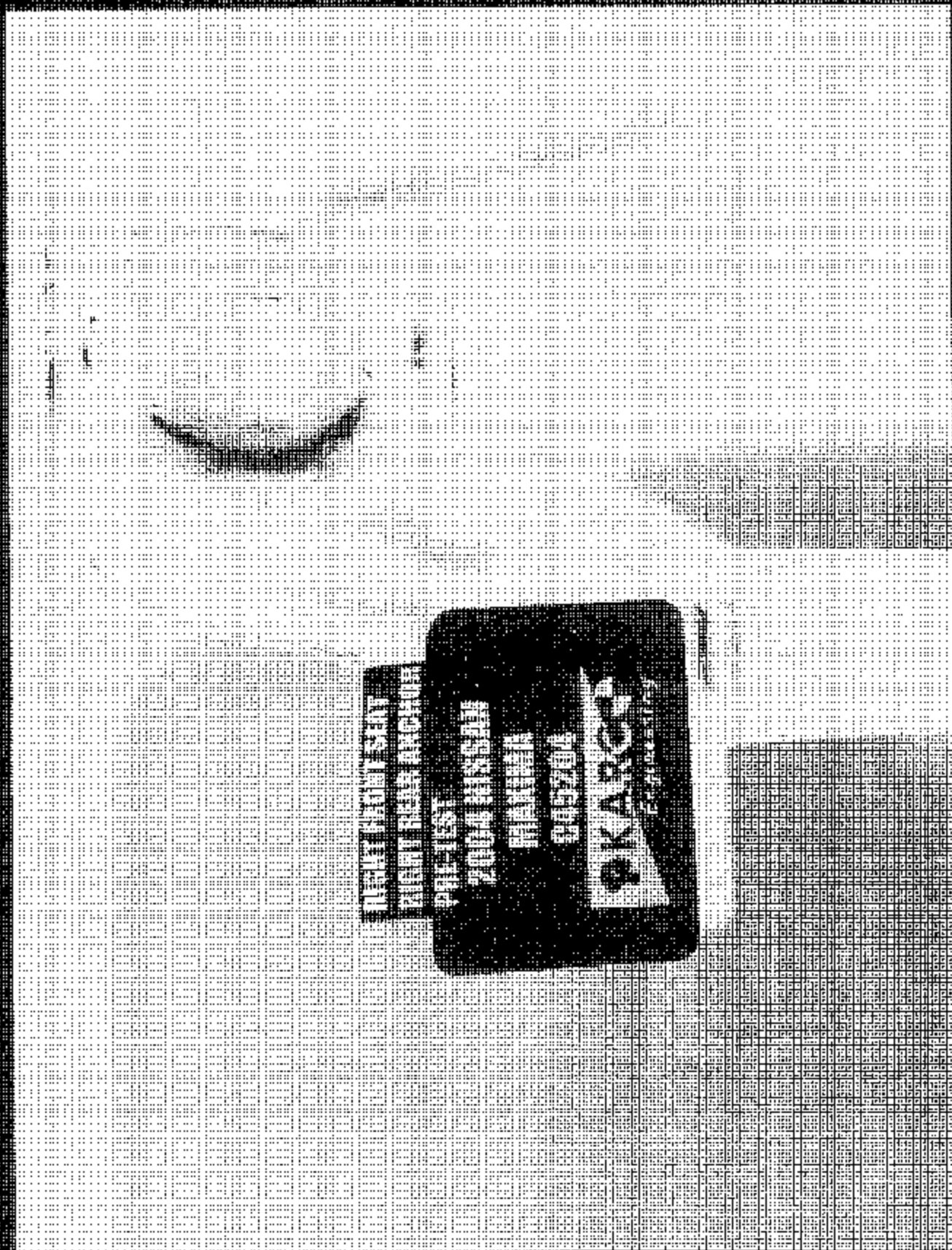


Figure A-73. Seal Anchor, Right Foot Seal, Pre-Fast

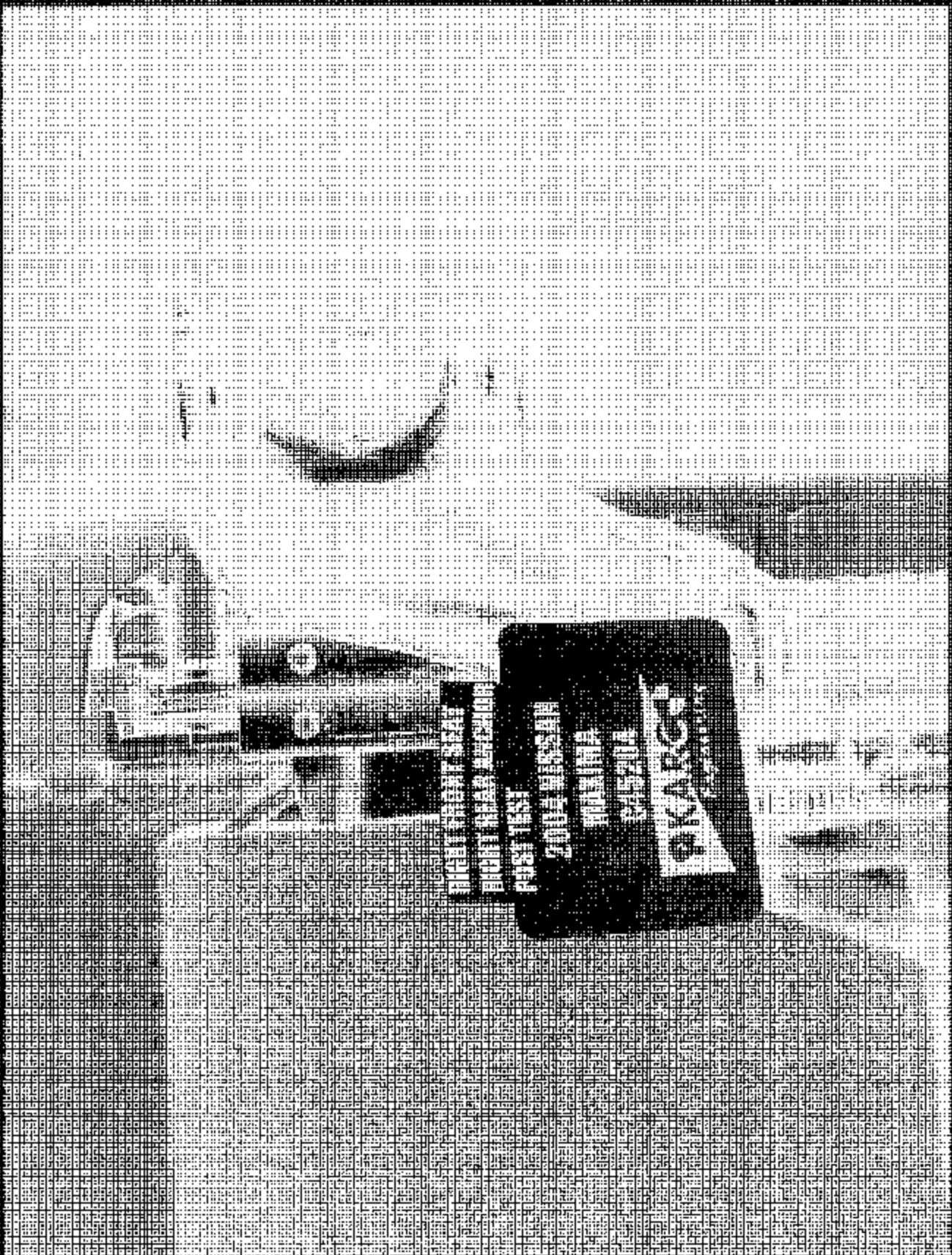
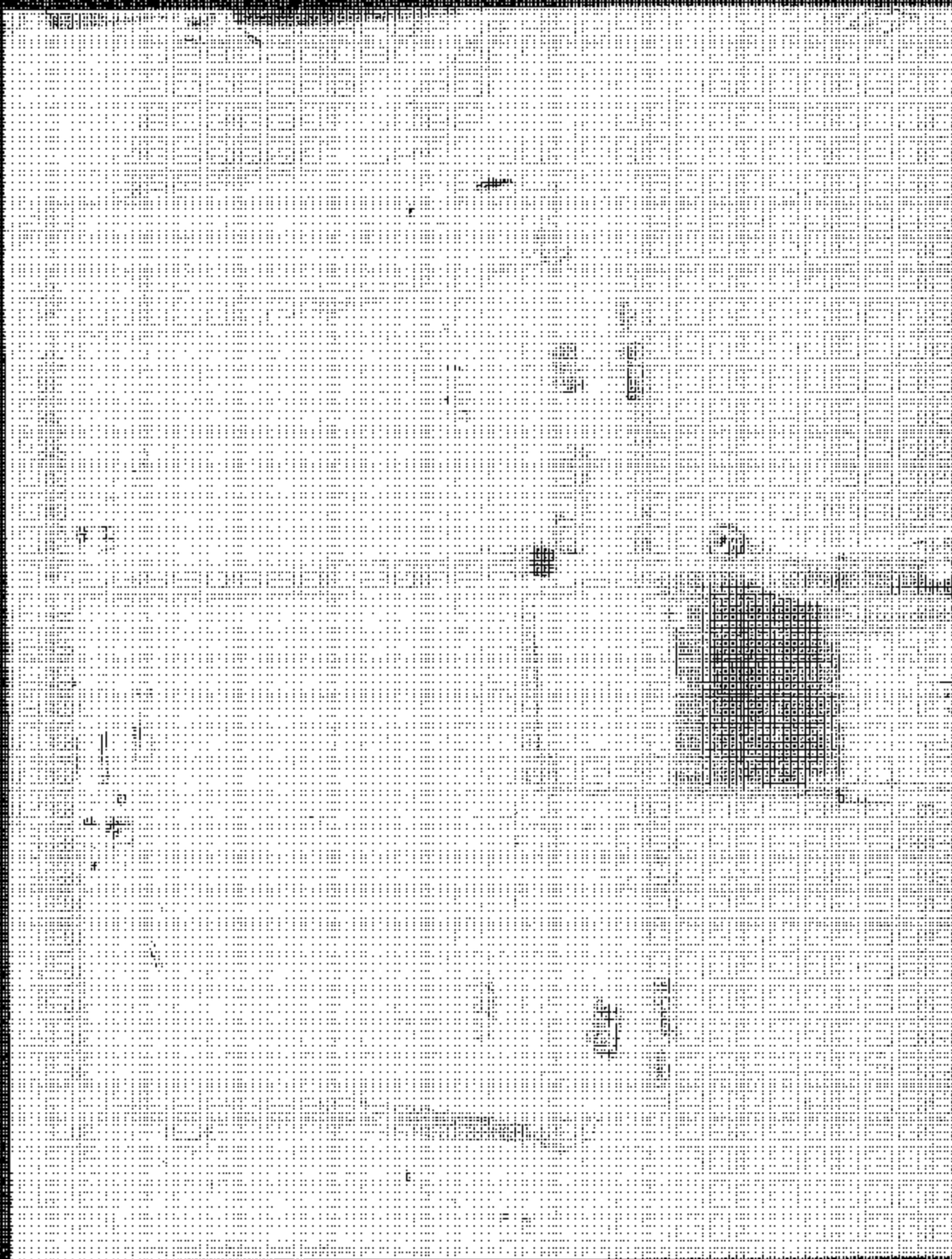


Figure A-74: Seat Anchor, Right Front Seat, Post Test



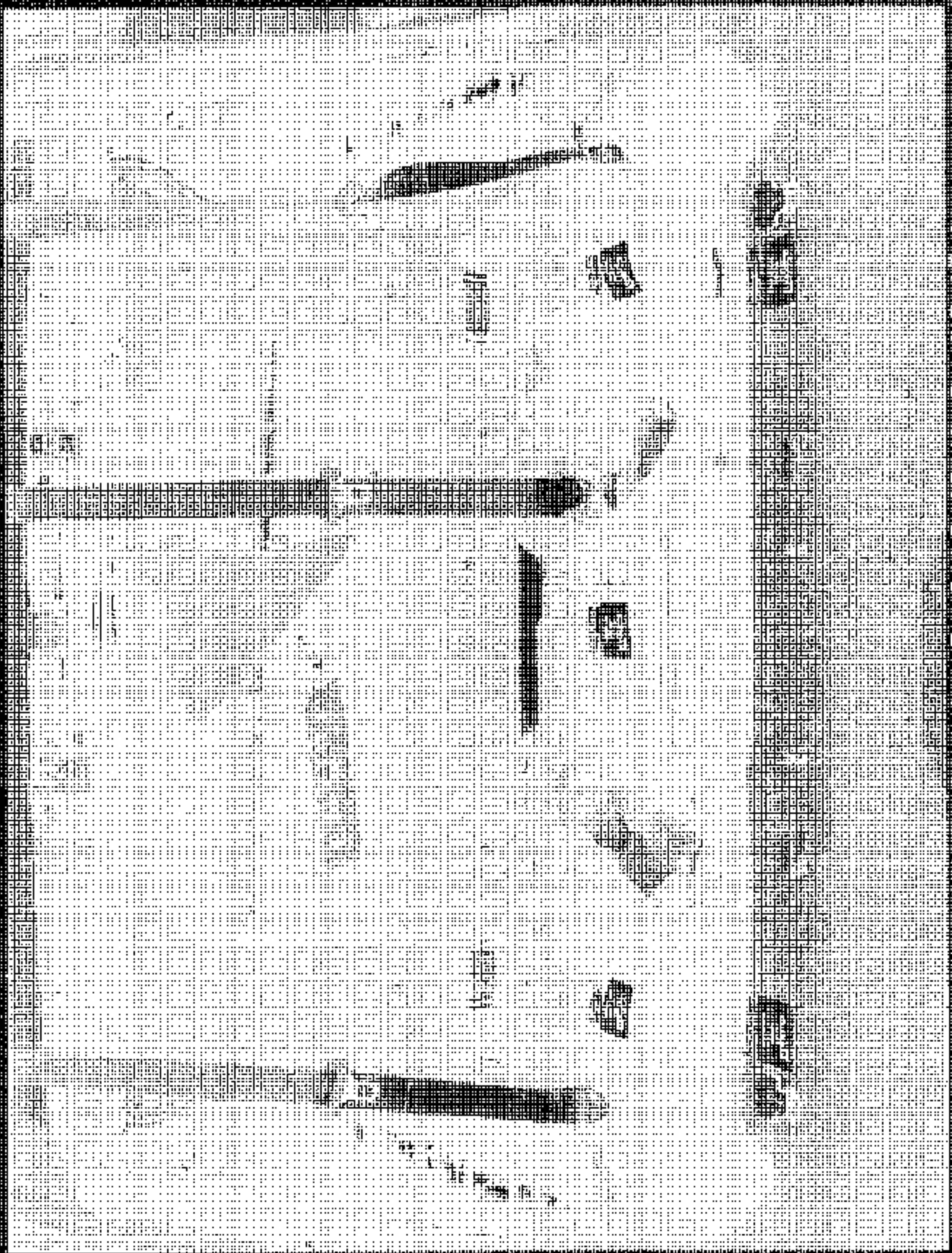


Figure A-15. Floor Plate Anchors, Rear Seat, Seat Cushion Overall, Post-Test

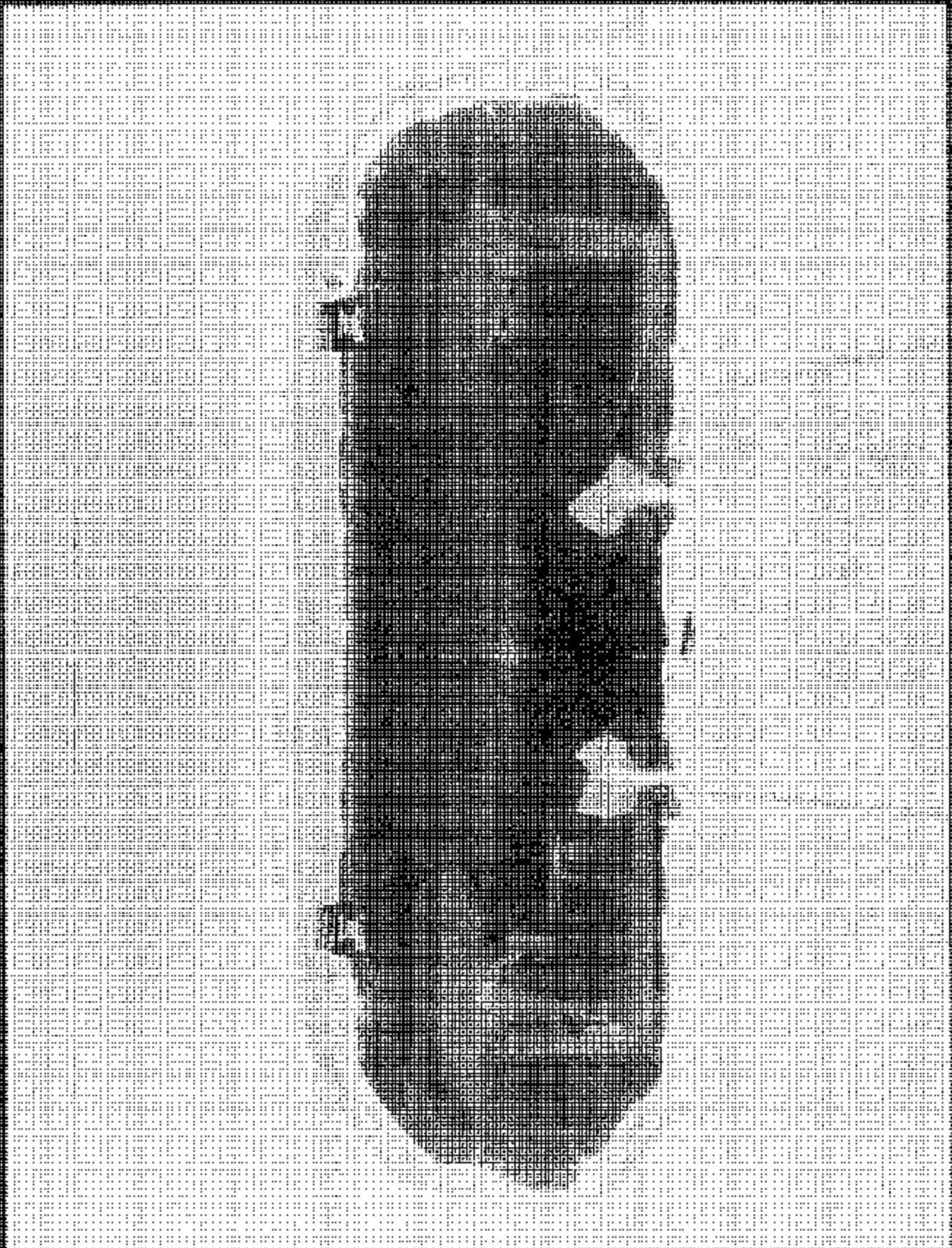


Figure A-17: Seal Actions: Seal Seal: Seal Condition Overall: Pie Test

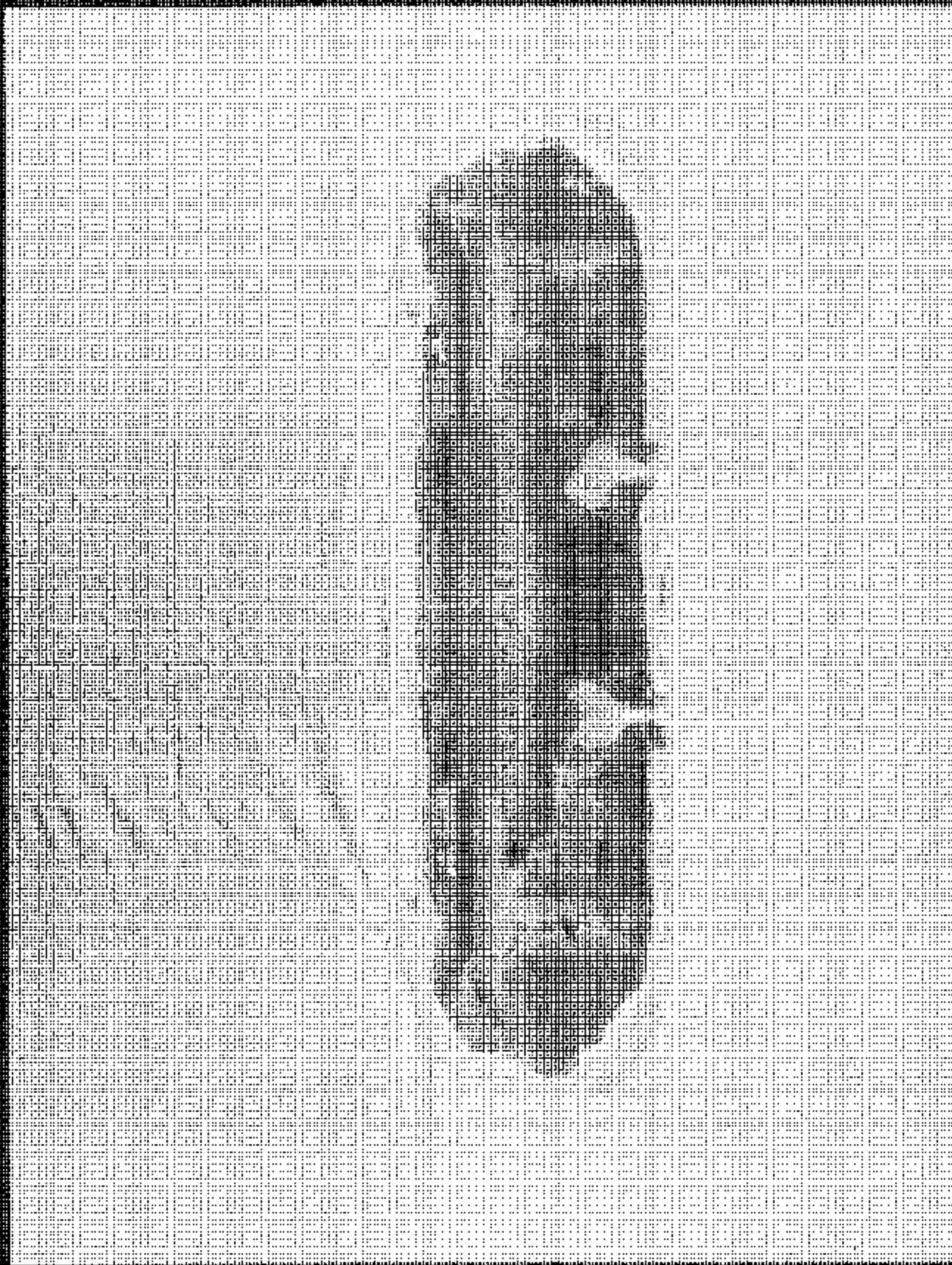


Figure A-78: Seal Antidote, Real Seal, Seal Gasket, Crest, Post-Test

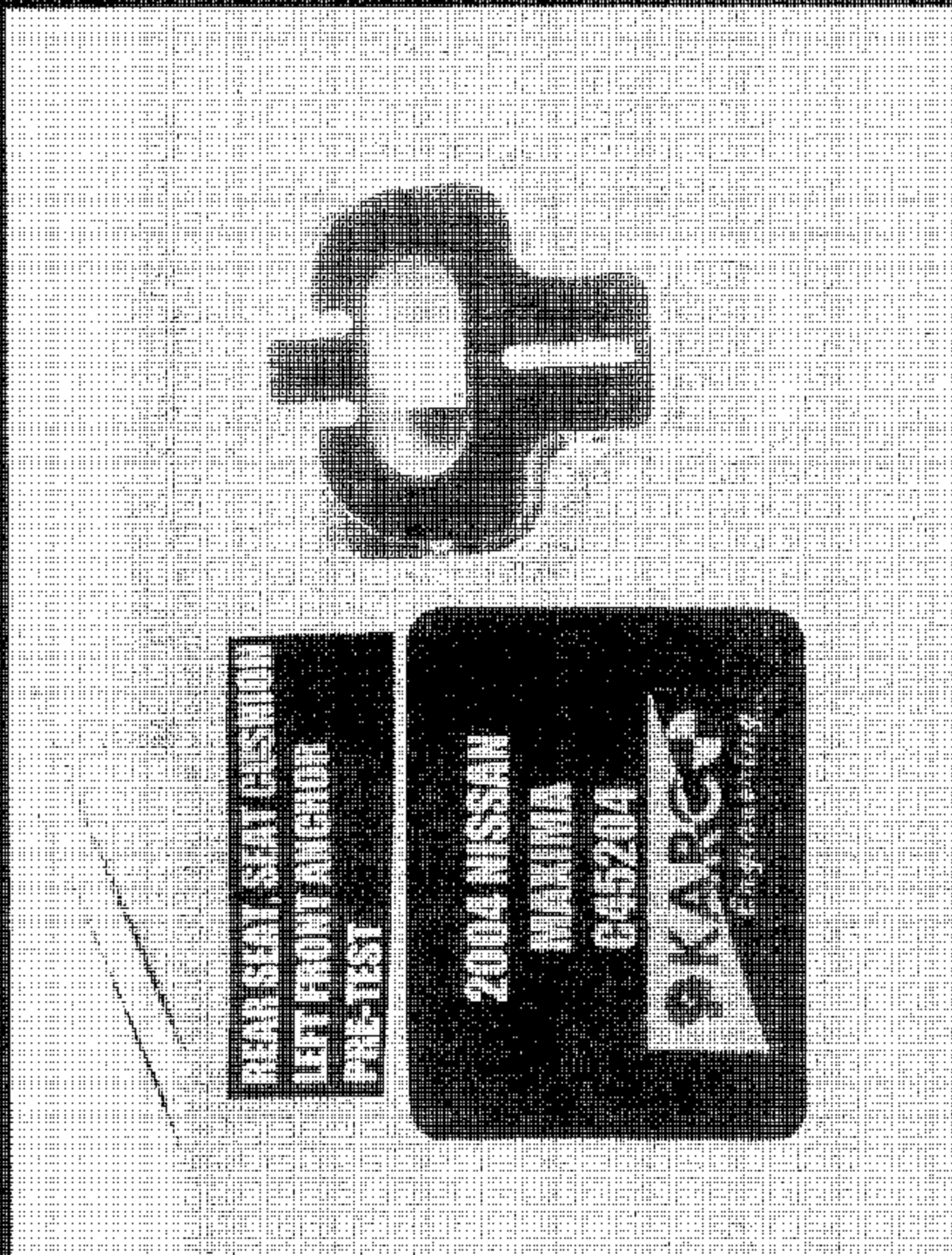


Figure A-79: Floor Pan Anchor, Post, Seat, Seat Cushion, Post-Test

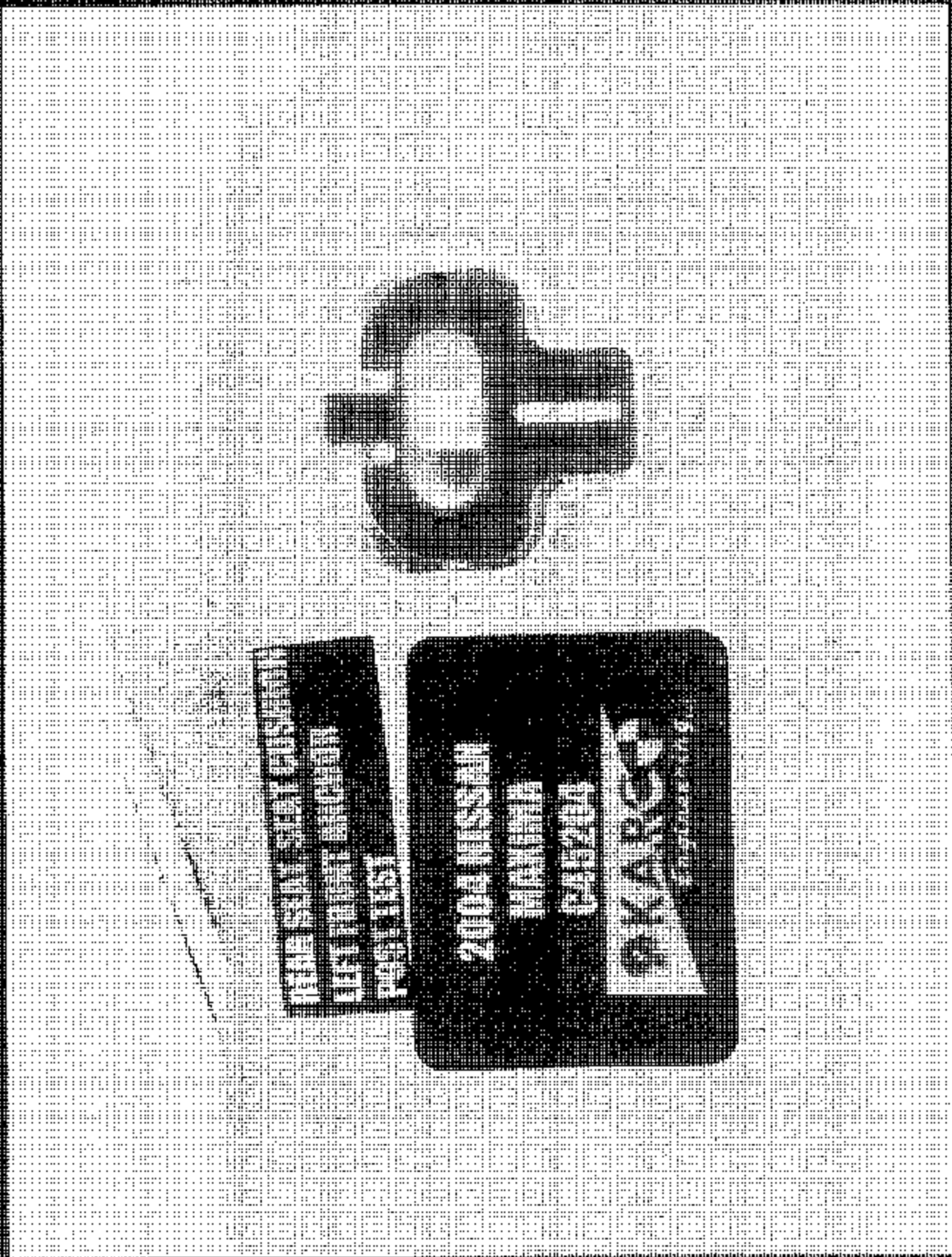


Figure A-80 Floor Fan Anchor, Rear Seat, Seat Cushion, Post-Ties

REAR SEAT, SEAT CUSHION
LEFT FRONT ANCHOR
PRE-TEST

2004 NISSAN
MAXIMA
C45204

PIVOTAL
Engineering

Figure A-81: Seat Anchor, Rear Seat, Seat Cushion, Pre-Test

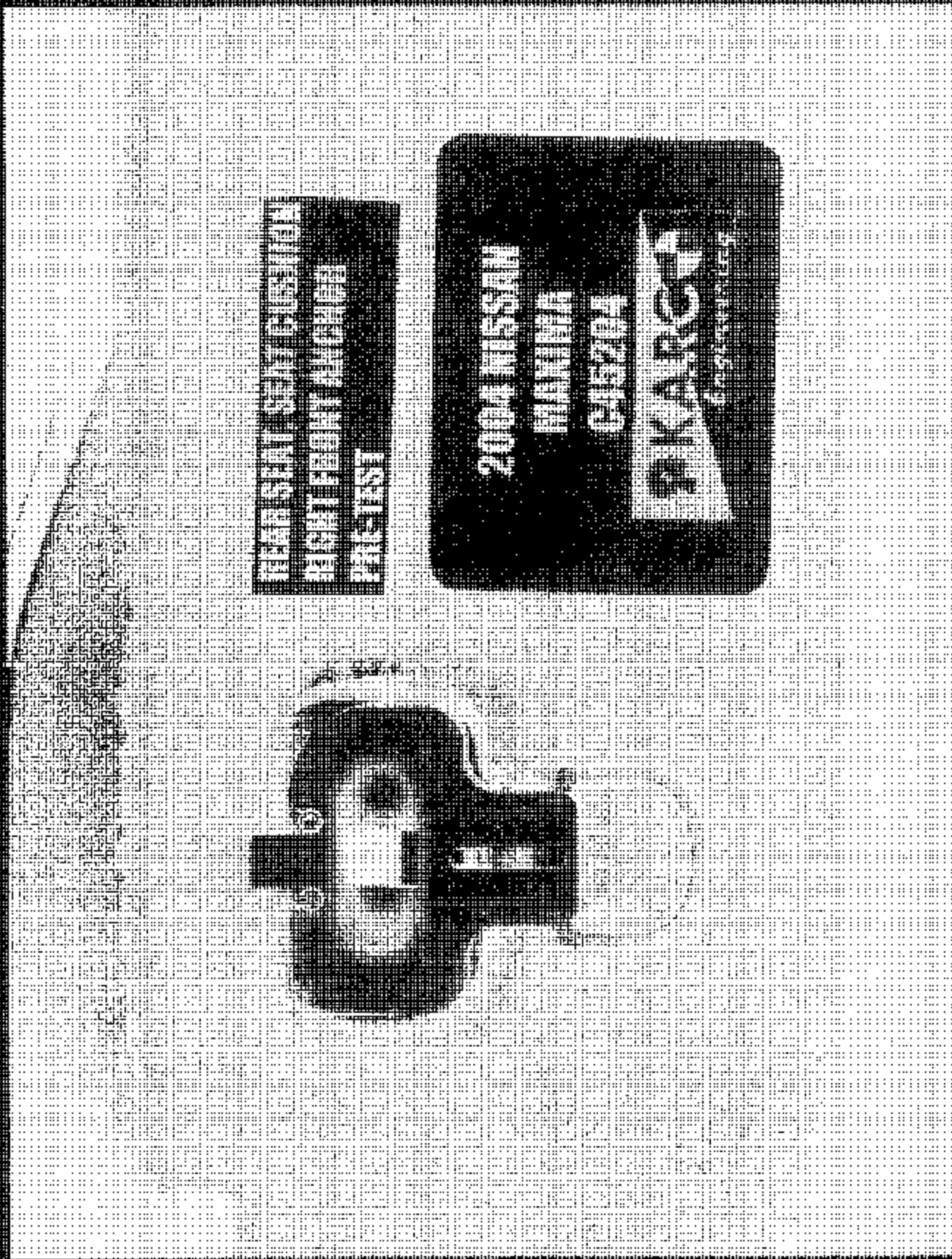


Figure A-63. Rear Seat Cushion, Rear Seat, Seat Cushion Pre-Test



Figure A-94 Floor Pier Anchor Red Seat, Seat Cushion Post-Tension



Figure A-15: Seed Anchor, Row Seat, Seat Cushion, Pre-Test

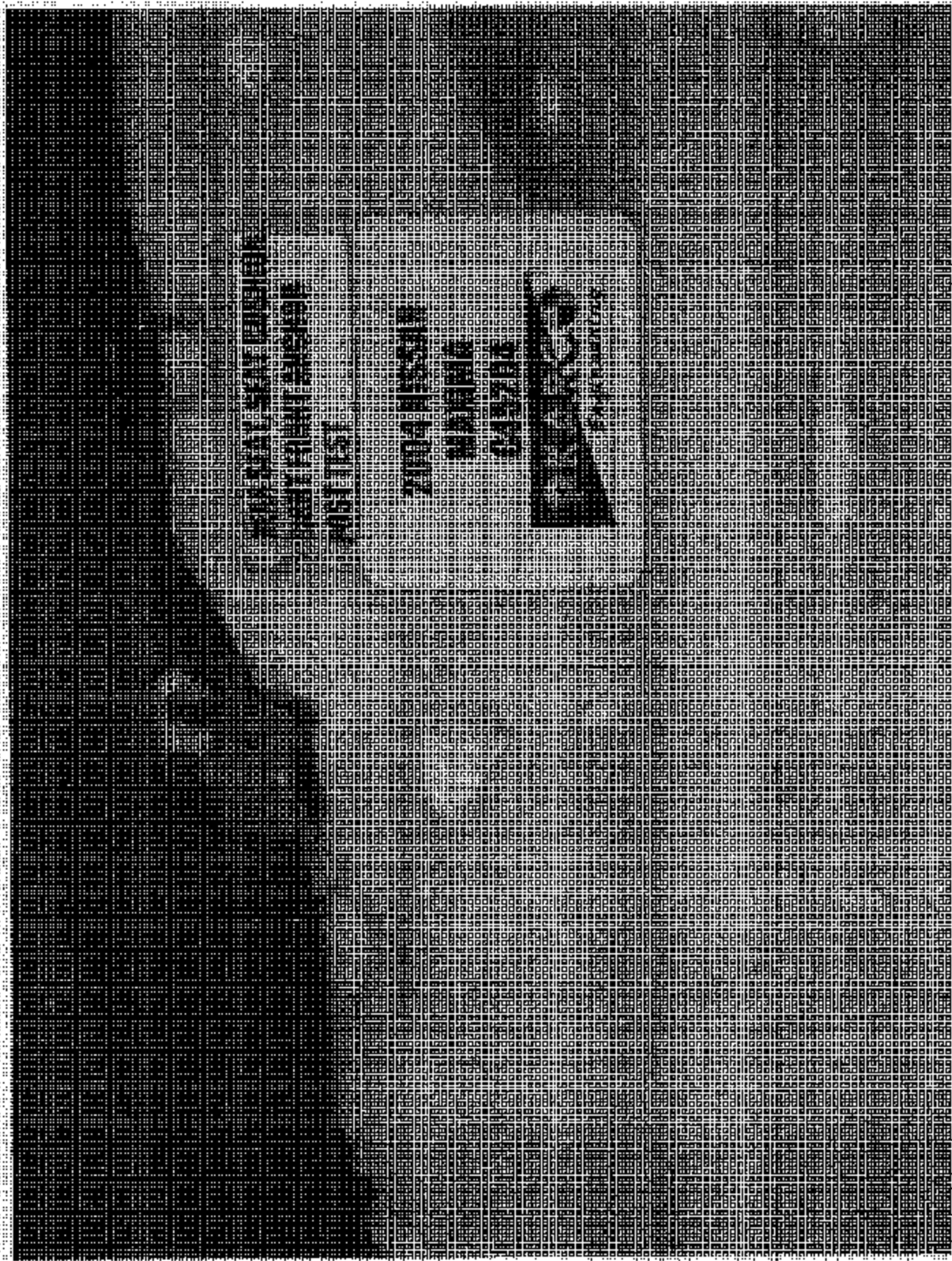


Figure A-80: Seat Anchor, Rear Seat, Seal Cushion, Post-Test

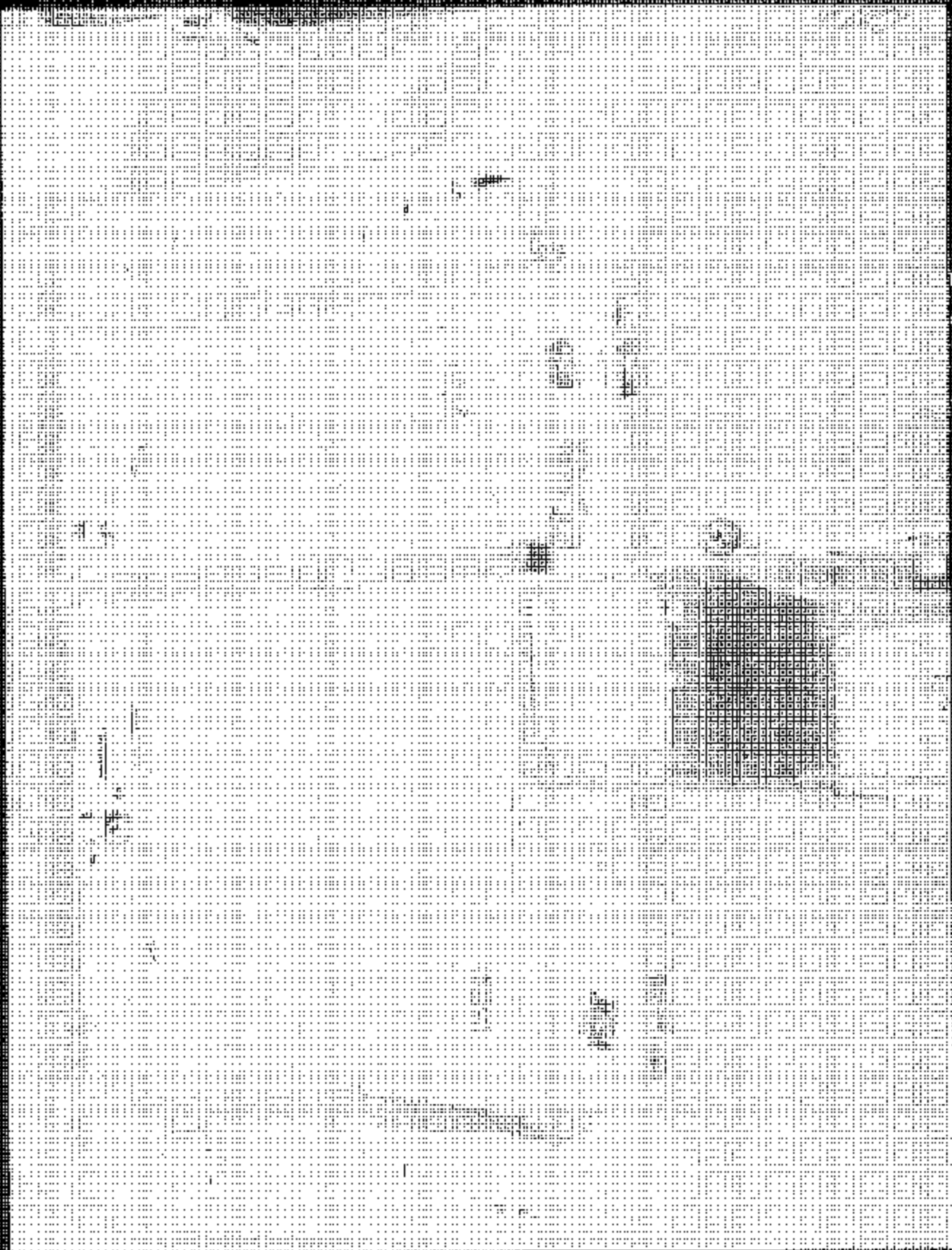


Figure A-47: Floor Plan Antenna, Rear Seat, Seat Back, Cupboard, Pro-Tect



Figure A-88: Floy Pen Anchors, Rear Seat Seal Back Coverlet, Fuel Tank

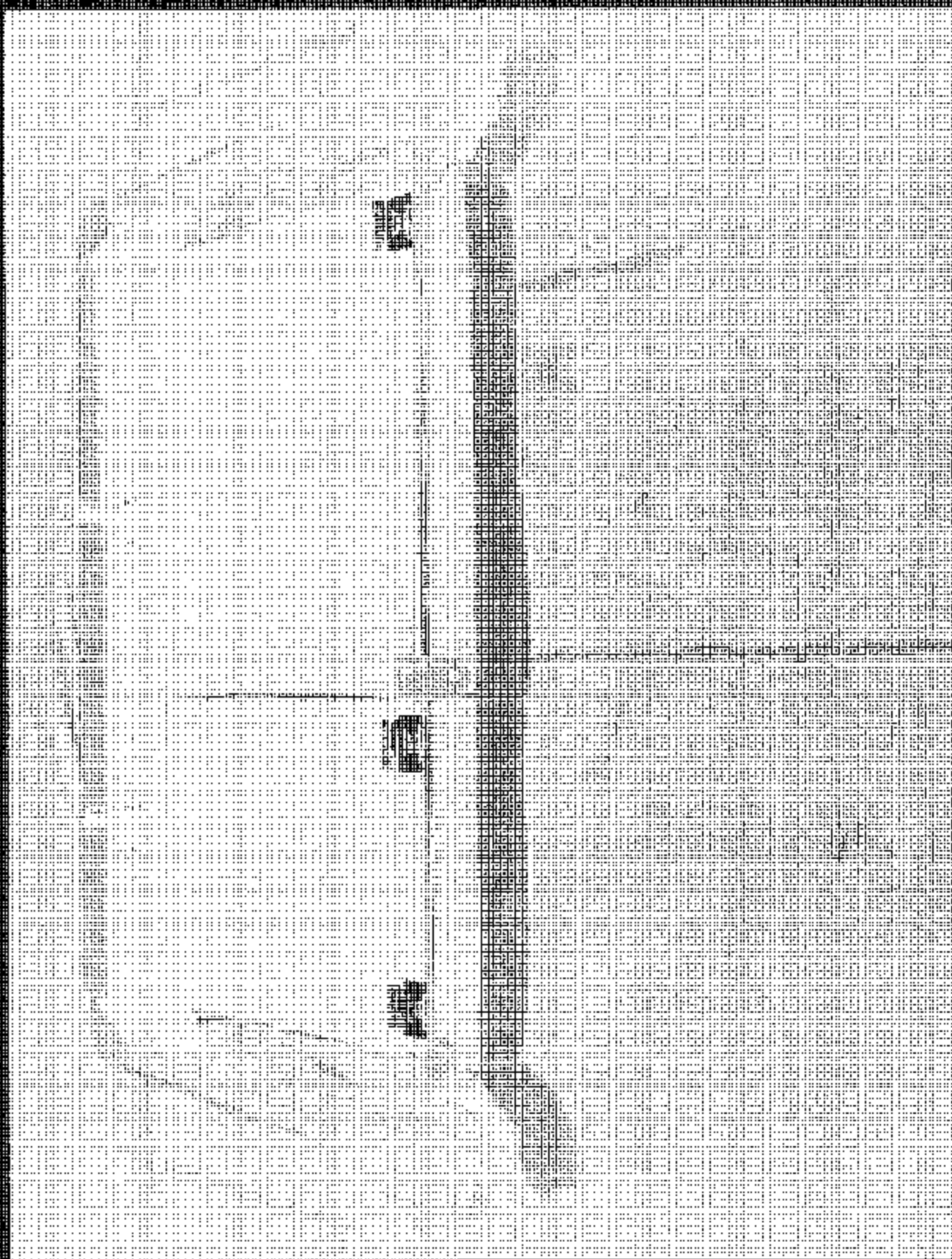


Figure A-49: Seat Anchors, Rear Seat Back Overall Pre-Tied

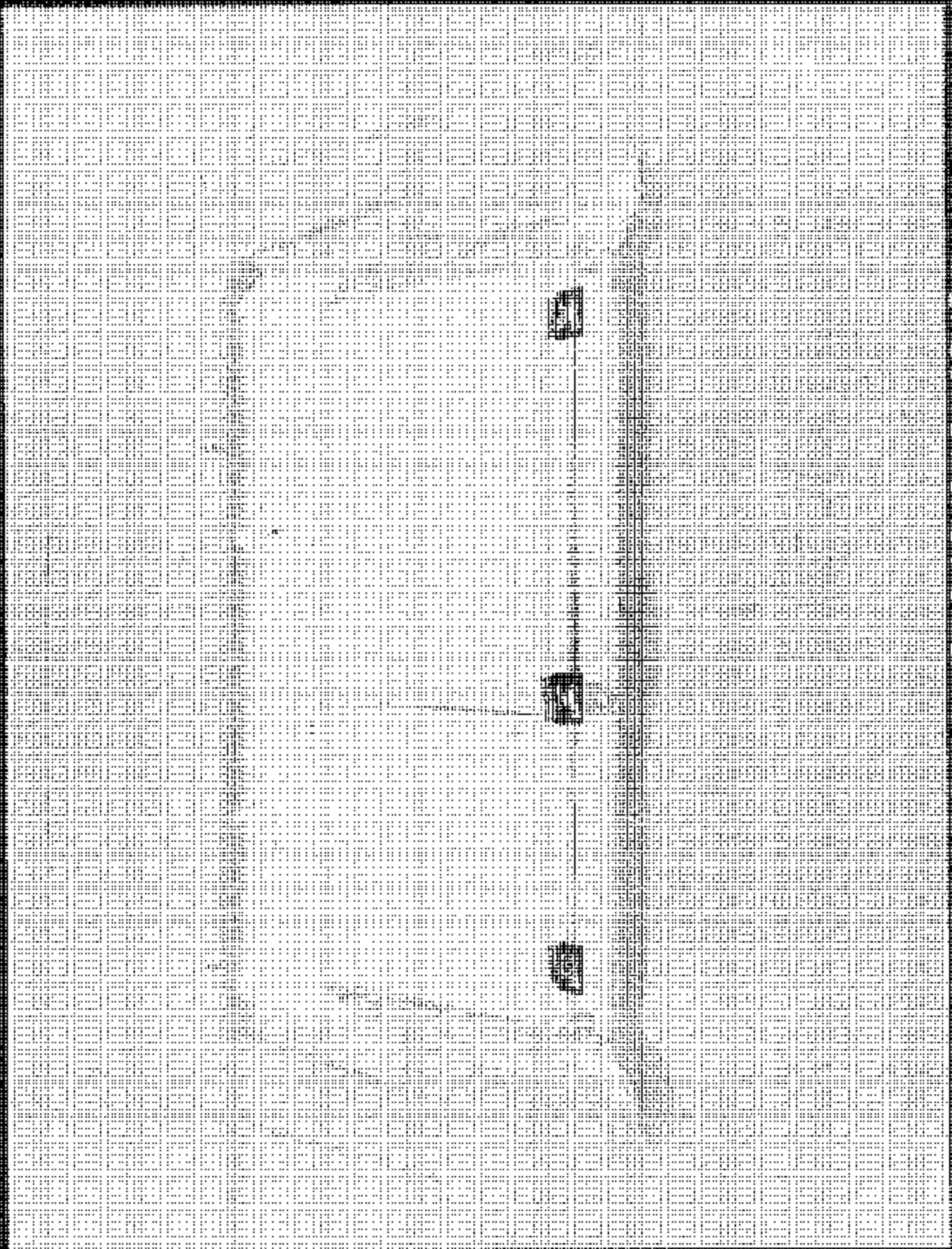


Figure A-62: Seat Anchors, Rear Seat, Seat Back Overall Post-Fail

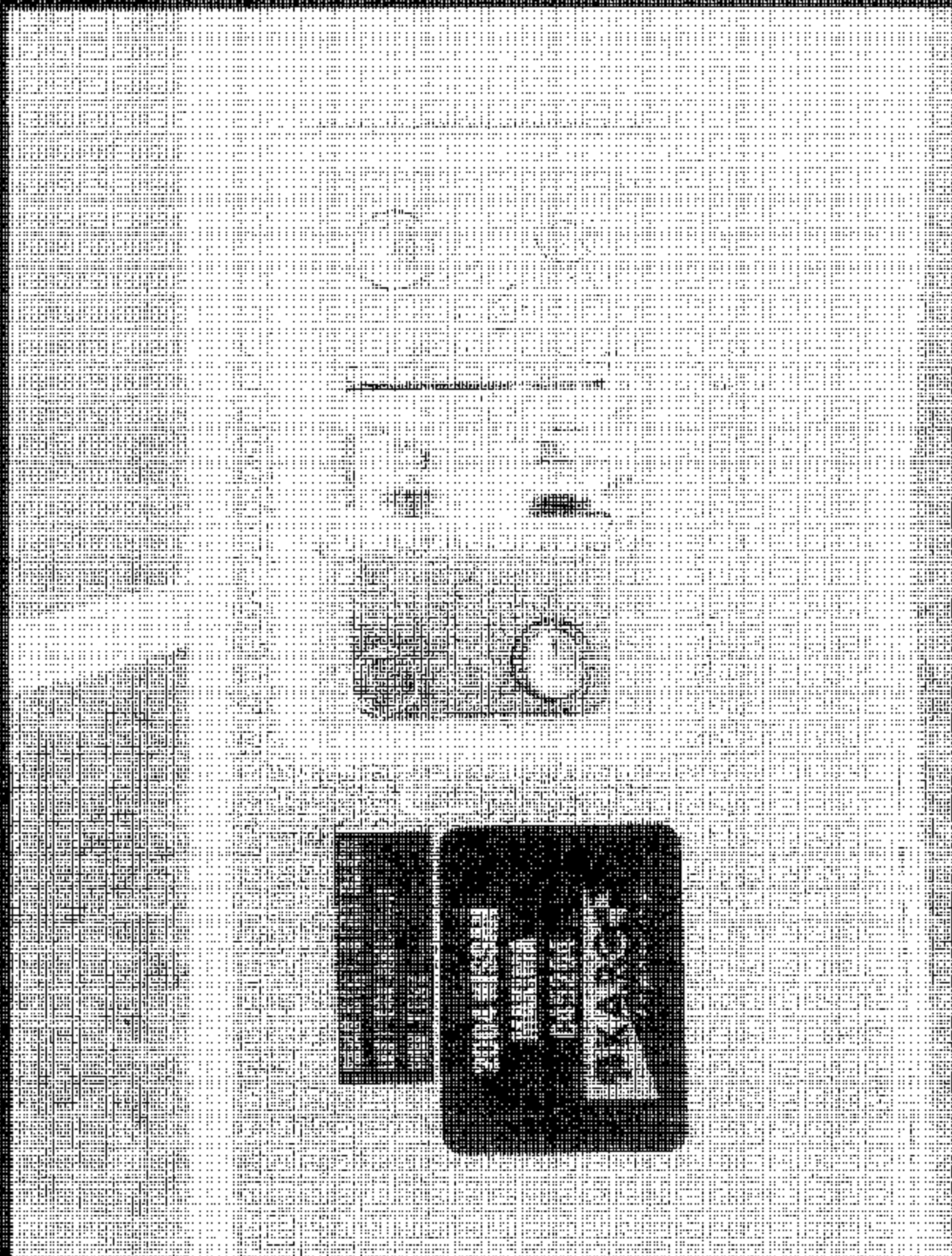


Figure A-91: Floor Pan Assy, Rear Seat Steel Back, Pre-Paint

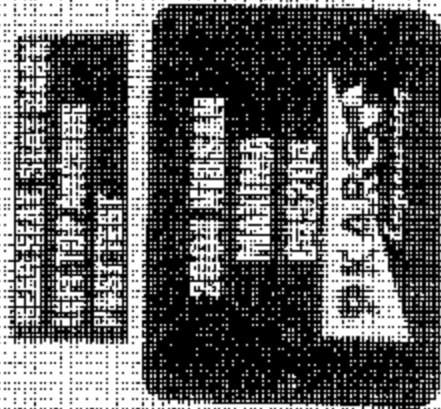


Figure A-92: Poly Pen, Andover, Rem Seal, Small Back, Post Test

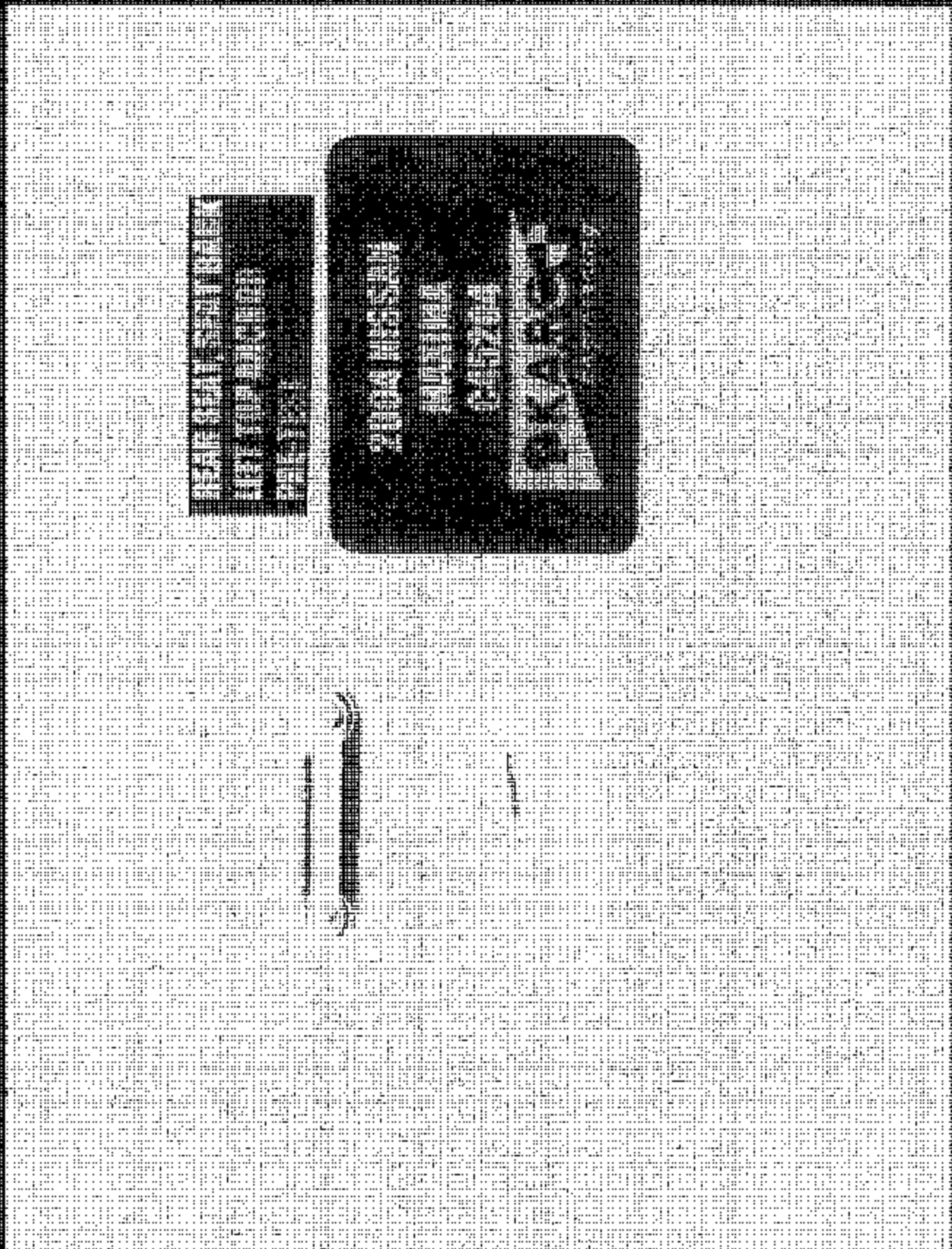


Figure A-23: Solid Aichey, Roof Seal, Seal Block, Pro-100

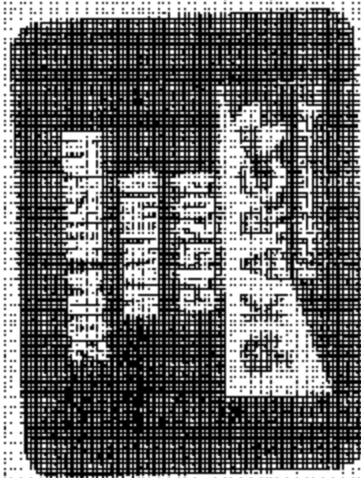


Figure A-64: Sant Anchor Rear Seal, Sant 3ms, Post-Test

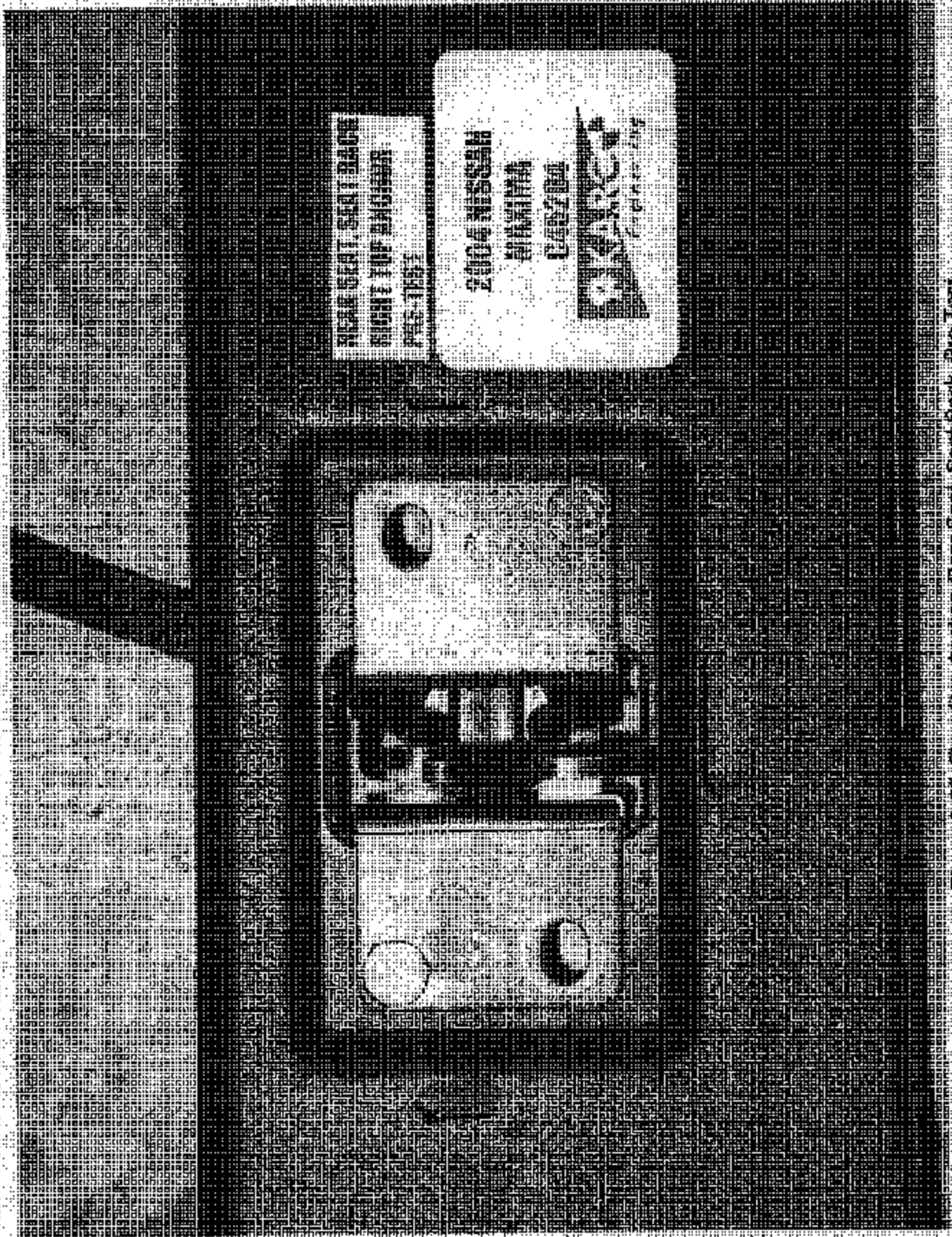


Figure A-05: Floor Pan Anchor, Rear Seat, Seat Back, Pre-Test

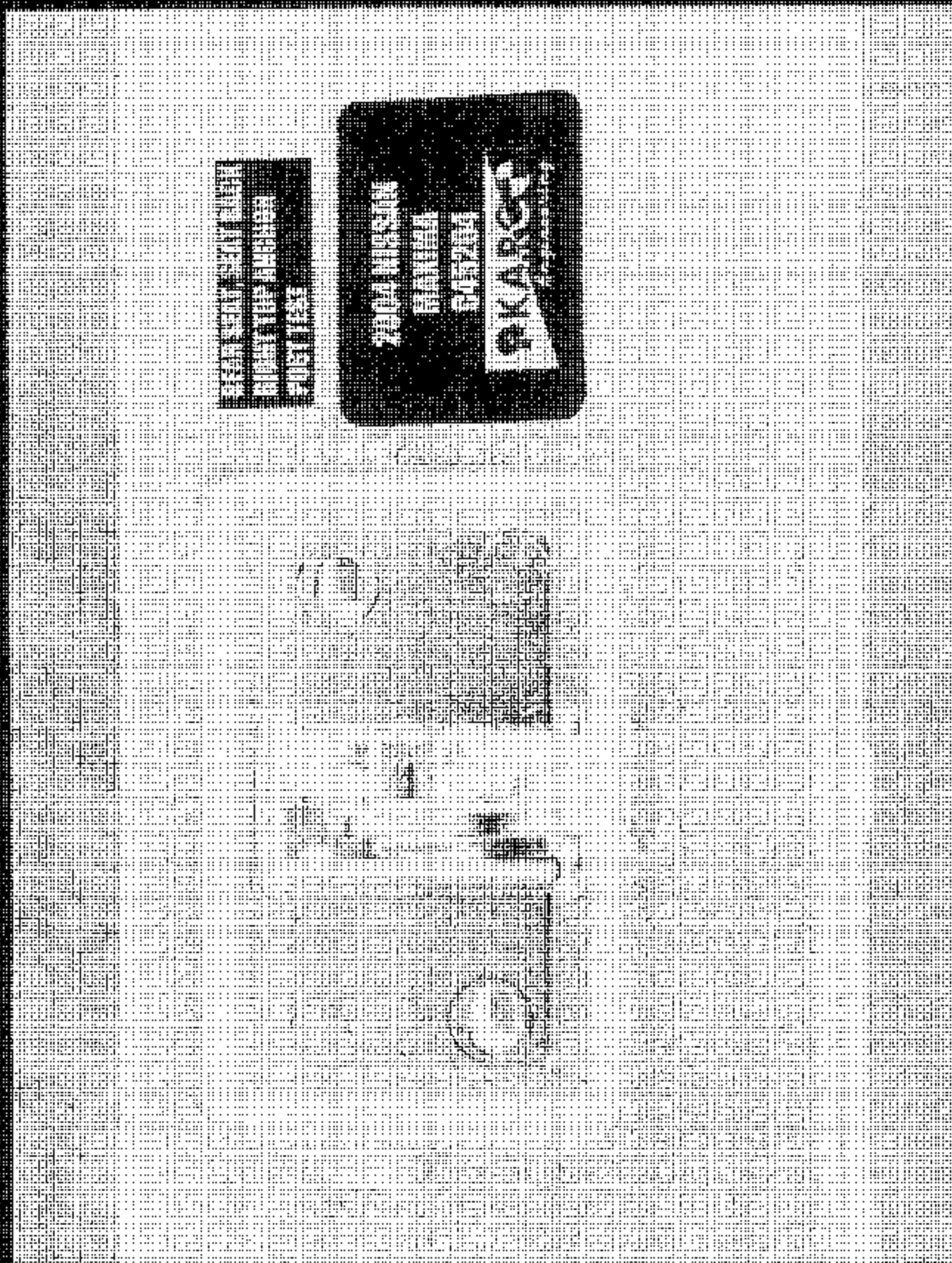


Figure A-16: Floor Plan Anchor, Rear Seat, Seal Back, Post-Yield



Figure A-9-6. Smart Anchor. Radr Seal. Seal Snak. Post-Tak.

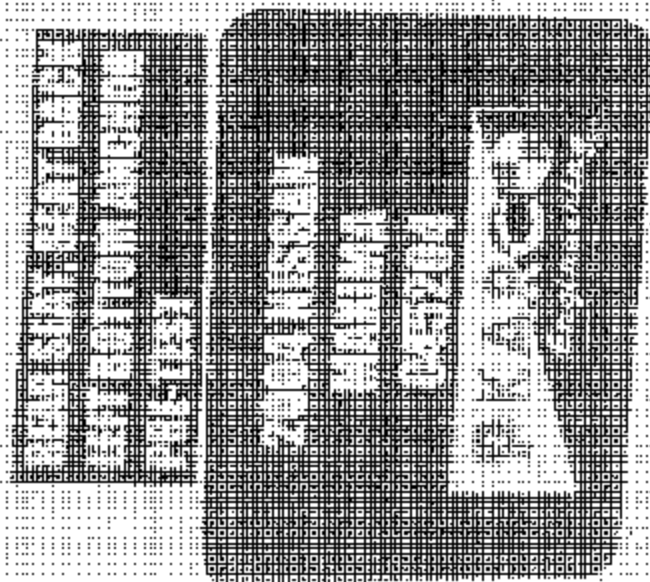


Figure A-38. Hubs/Plan Vector, Rear Seat, Seat Back, Pro-Test



Figure A-103: Floor Pan Anchor, Rear Seat Side Bore, Post Test

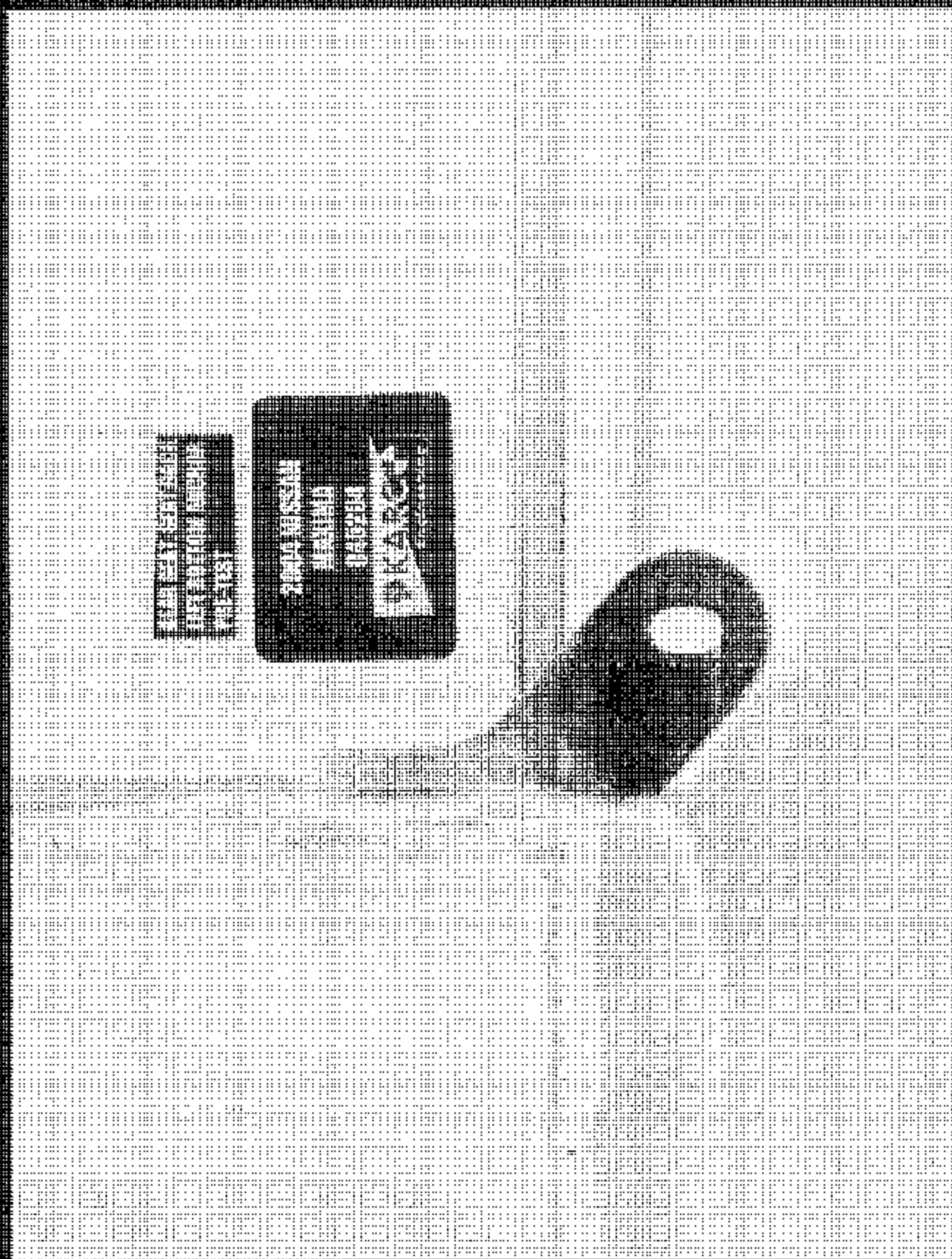


FIGURE A-101: Sabi Anchor, Rear Seat, Seat Back, Pre-Test



Figure A-103: Rear Seat Back, Pre-Test

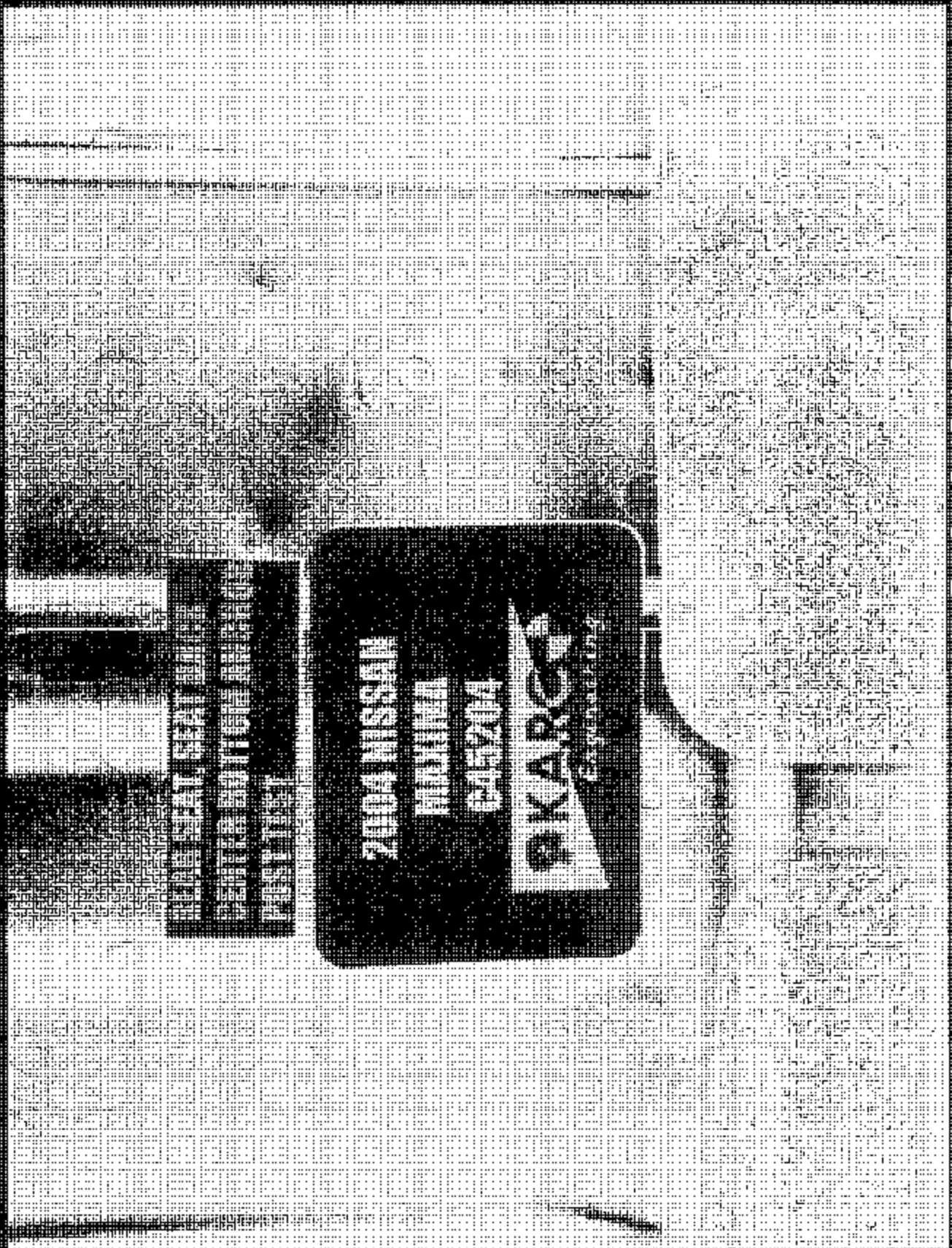


Figure A-104: Floor Pan Arch, Rear Seat Back Post Top

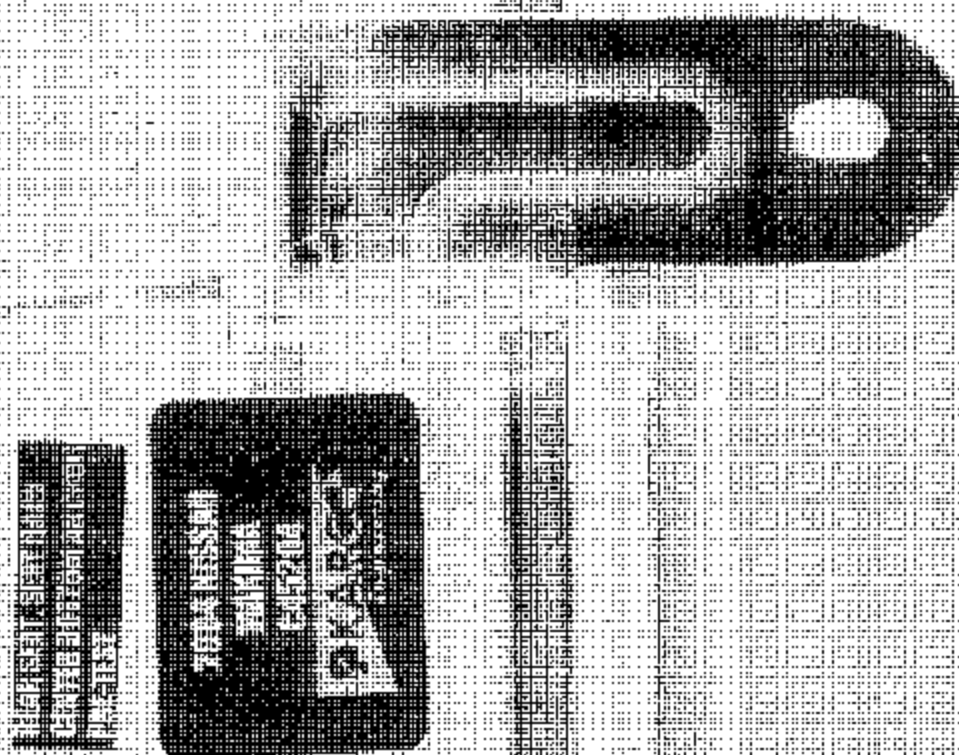


Figure A-105 Seal Application Robot Seal Each 1001 Seal



Figure A-107: Floor Pan Anchor: Rear Seat, Seat Back, Pre-Test

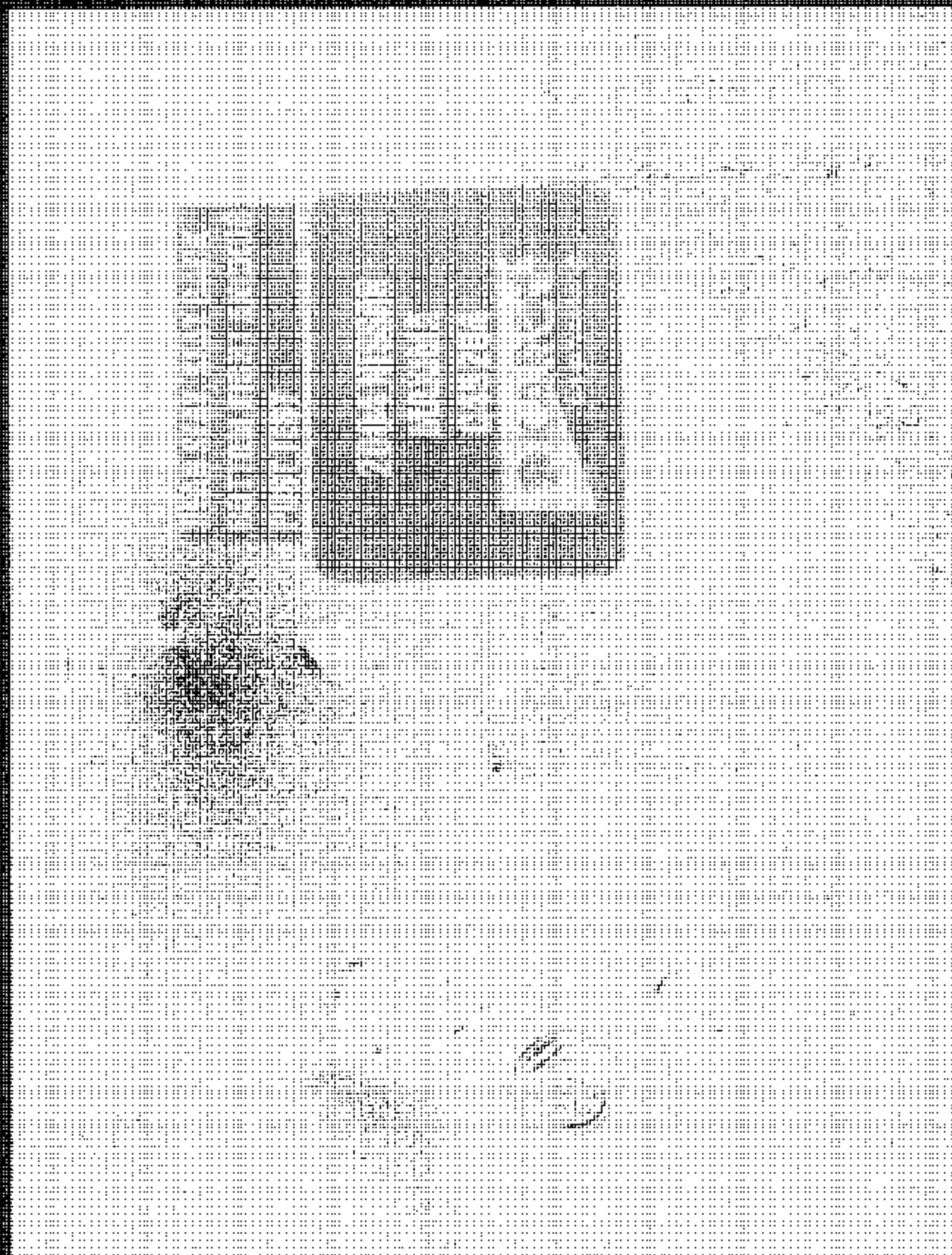


FIGURE A-103: FROZ PUN Anchor Red Seal Seal Back Post Test

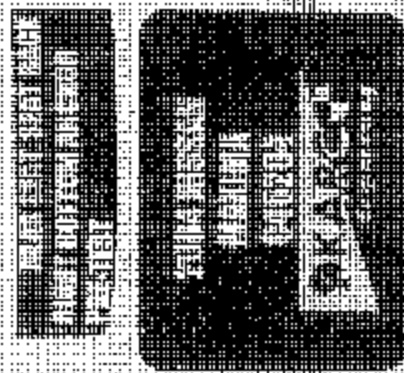


Figure A-103. Seat Anchor, Rear Seat, Seal Back, Pie-Toss

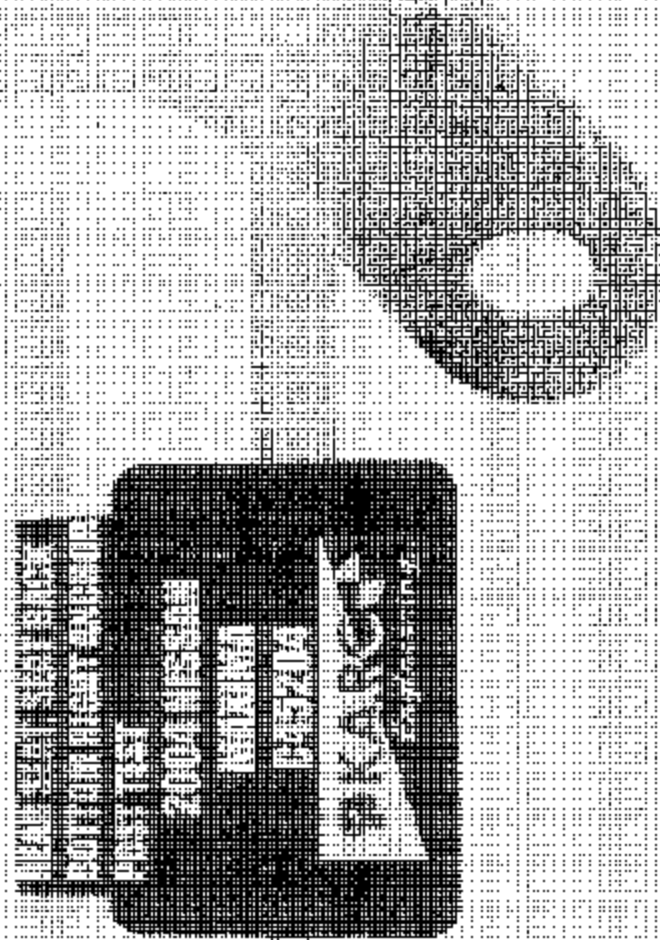
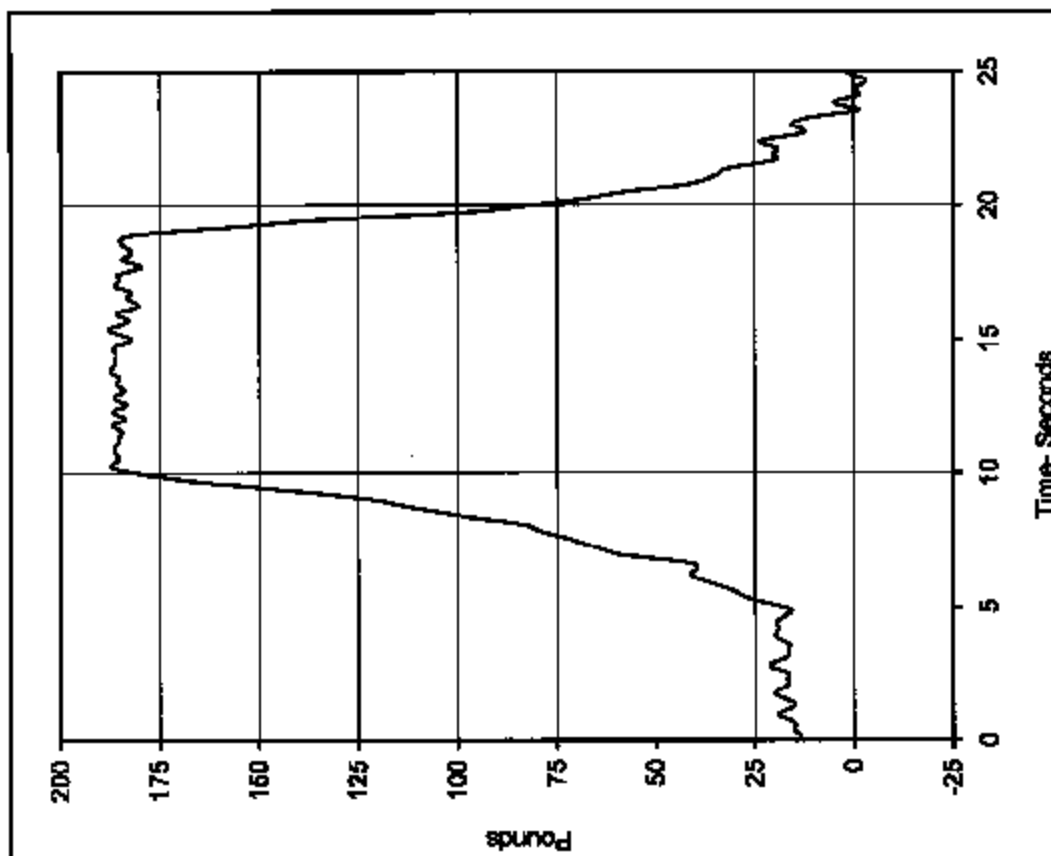


Figure A-110 Seat Anchor, Rear Seat, Cabl Back, Port Test

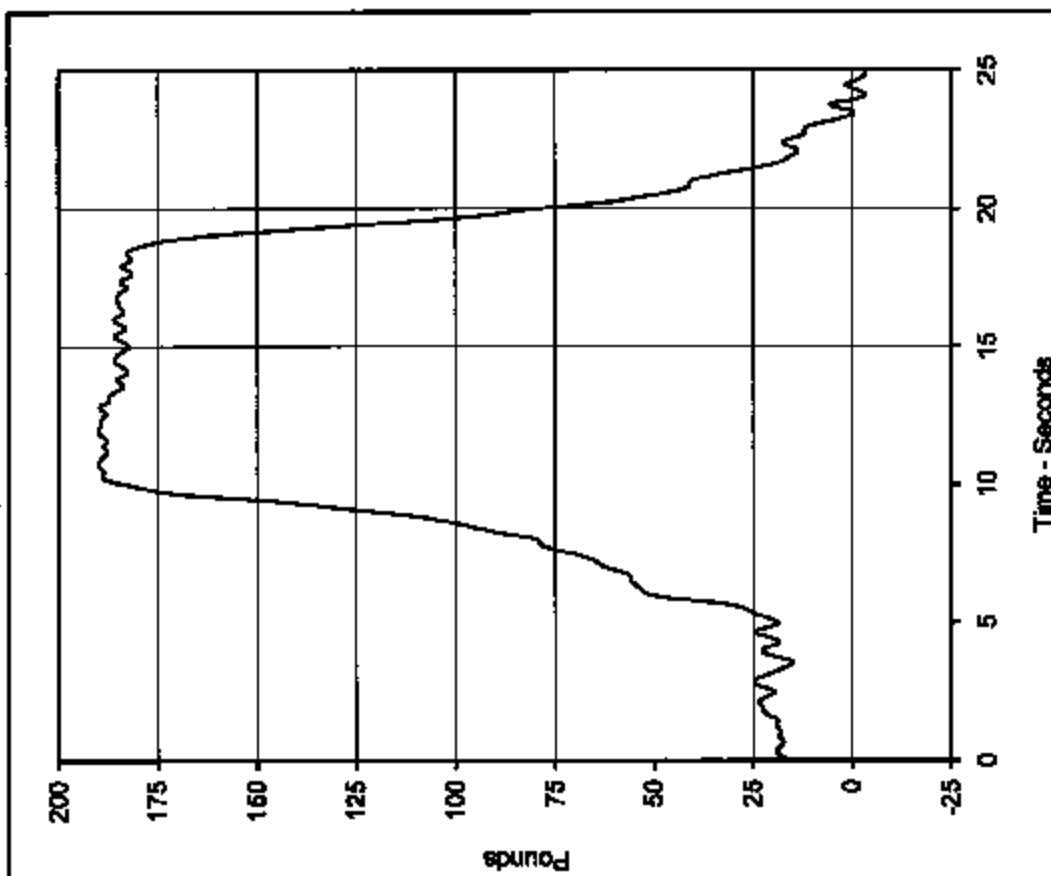
APPENDIX B
DATA PLOTS



Curve Description	CURNO	Type
Driver Air Moment Load	001	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	187.6	15.4	-2.9	24.7	1

Test Program: FMVSS 207 Air Moment (Front)
 Test Vehicle: 2004 Nissan Maxima 4 Door Sedan

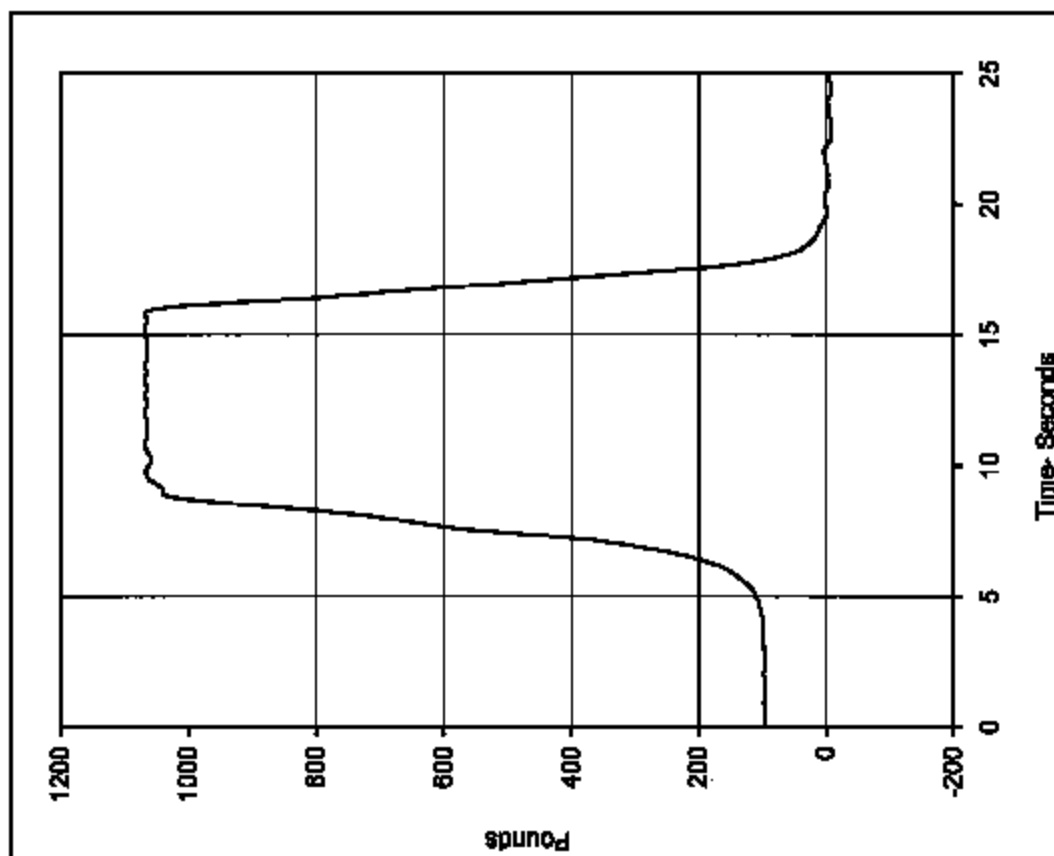


Curve Description	CURNO	Type
Passenger Air Moment Load	002	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	190.1	12.0	-3.2	24.9	1

Test Date: 6/16/04
 Project No.: C46204

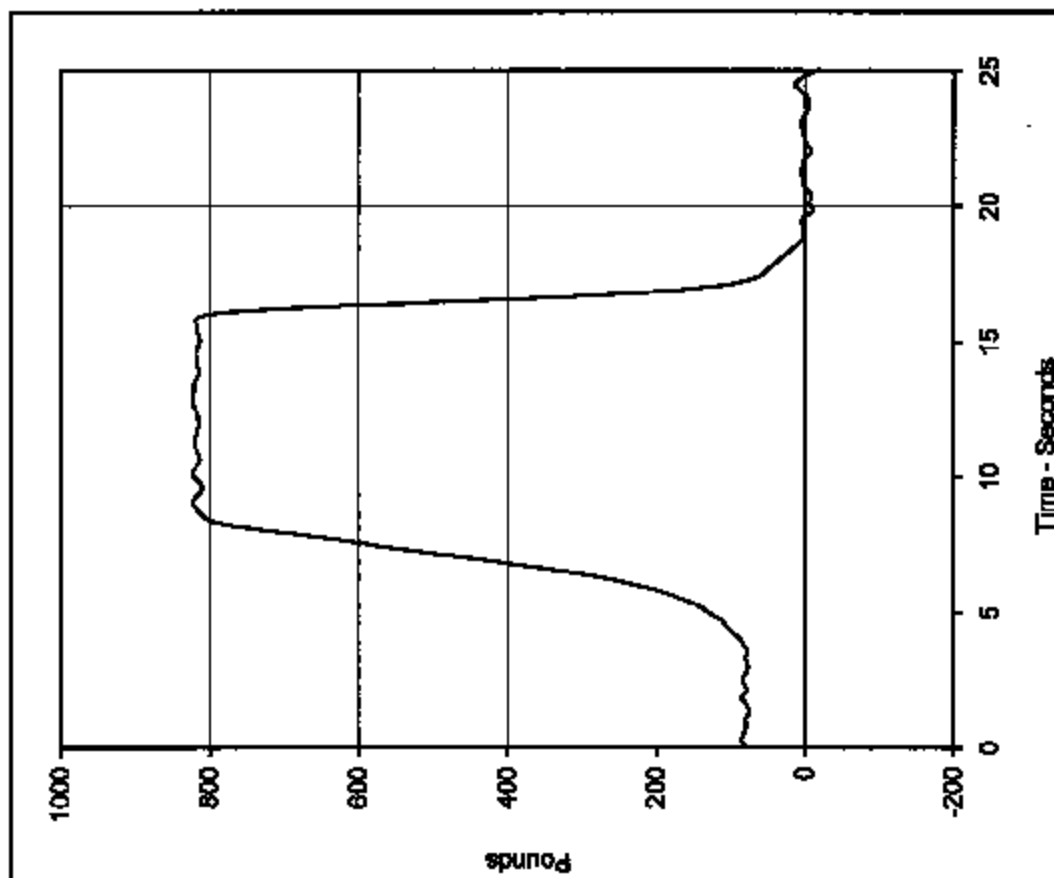




Curve Description	CURNO	Type
Driver Seat	001	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	1088.1	15.2	-8.3	22.8	1

Test Program: FMVSS 207 Air Seat Frame and Adjusters (Front)
 Test Vehicle: 2004 Nissan Maxima 4 Door Sedan

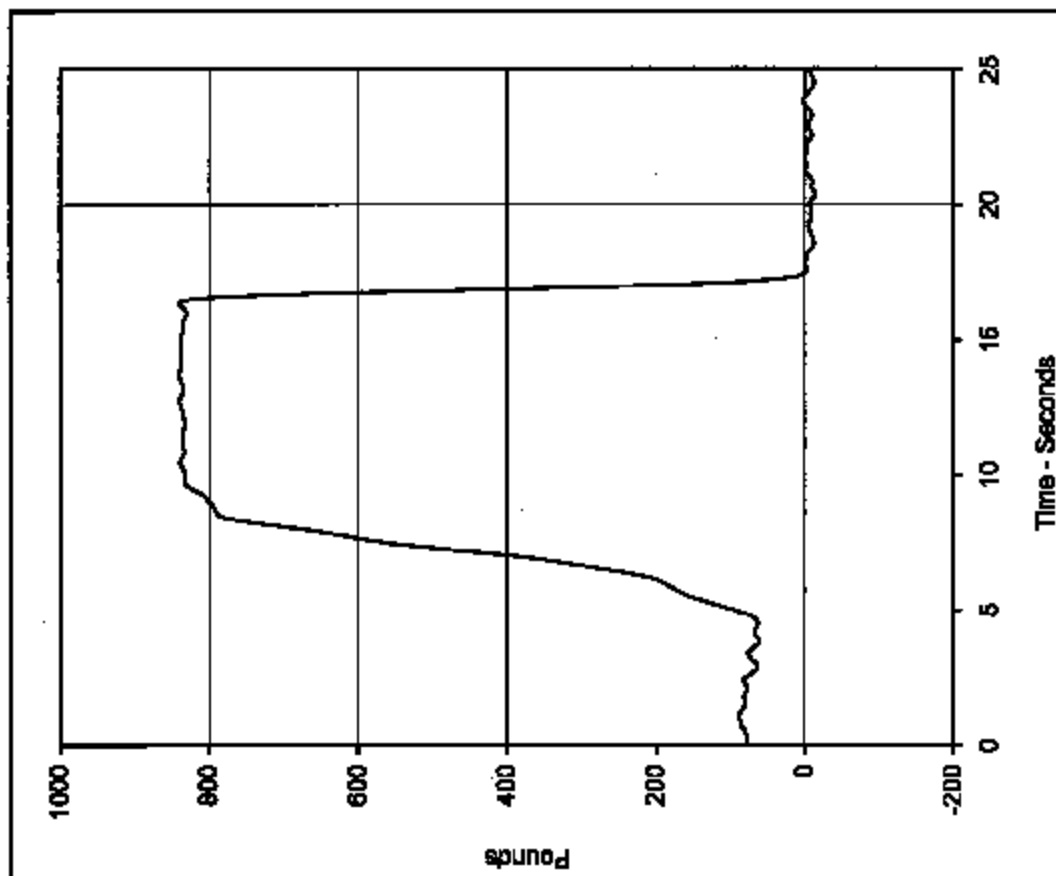
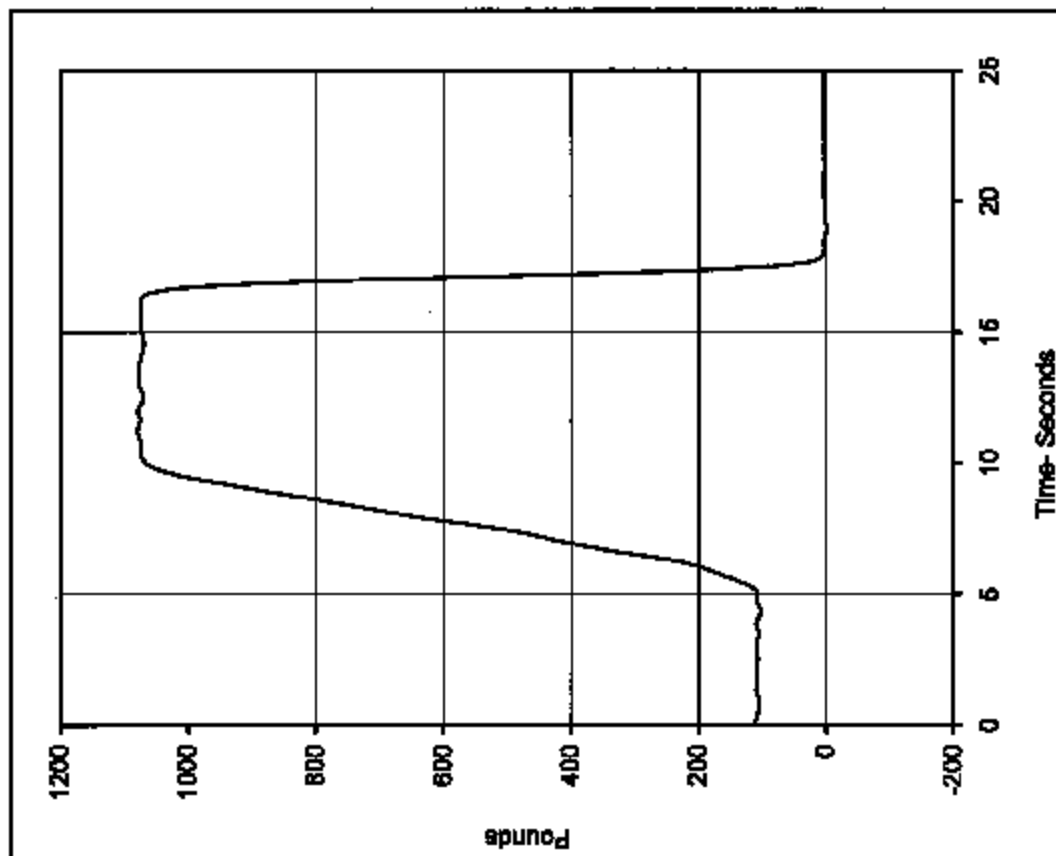


Curve Description	CURNO	Type
Pass. Seat	002	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	823.2	10.2	-13.4	25.0	1

Test Date: 6/18/04
 Project No.: C46204

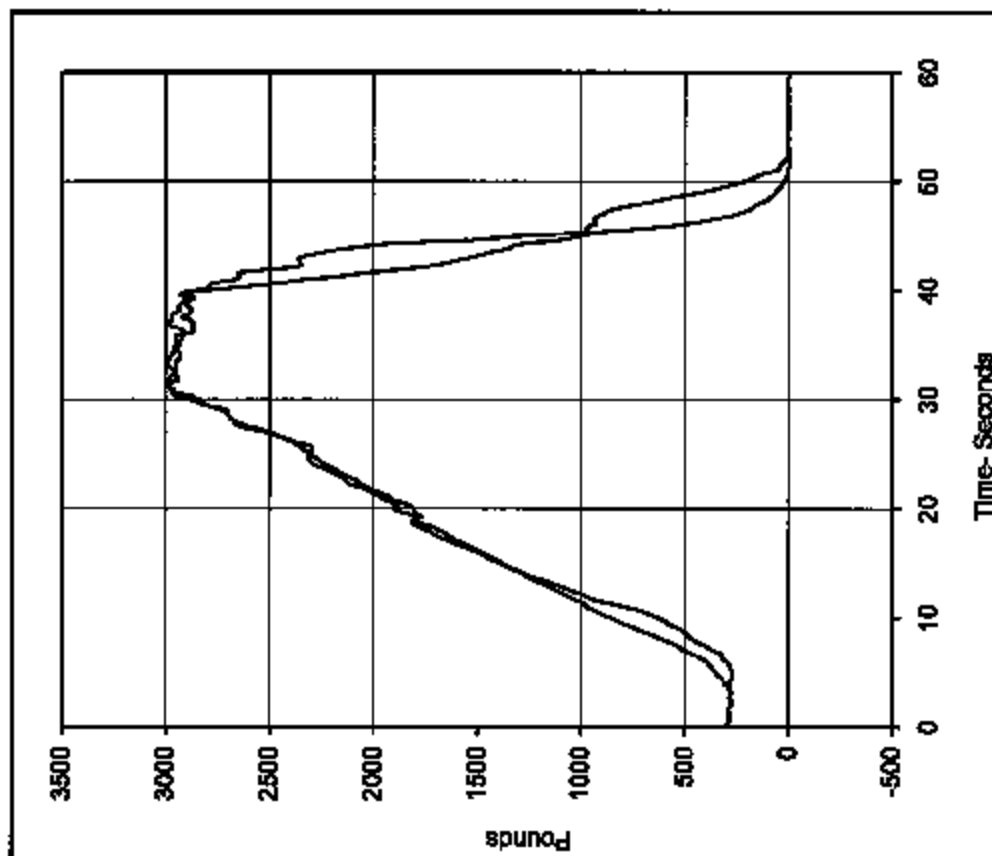




Test Program: FMVSS 207 Fwd Seat Frame and Adjusters (Front)
 Test Vehicle: 2004 Nissan Maxima 4 Door Sedan

Test Date: 8/21/04
 Project No.: C45204





Curve Description	CURNO	Type
Driver Lap Force	001	FIL
Driver Shoulder Force	002	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	2985.9	31.3	-4.9	58.7	1
Pounds	2994.6	31.4	-8.9	51.6	1

Test Program:

FMVSS 207/210 Front Seats

Test Vehicle:

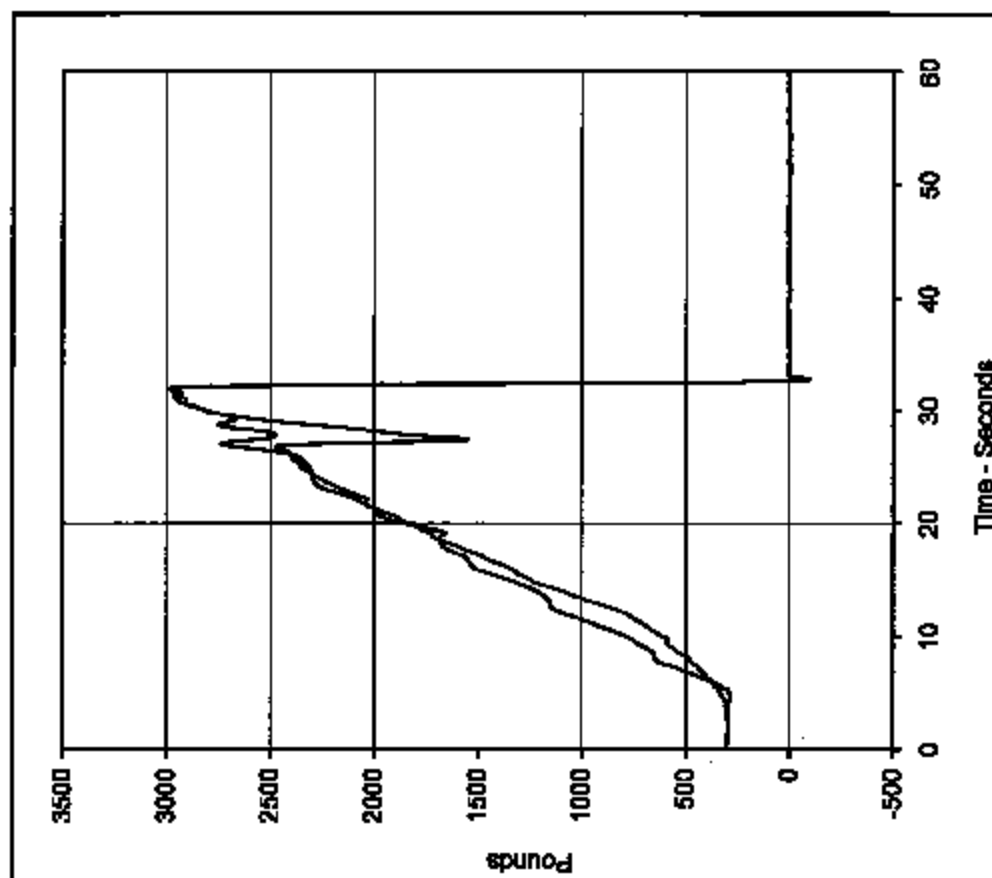
2004 Nissan Maxima 4 Door Sedan

Test Date:

6/23/04

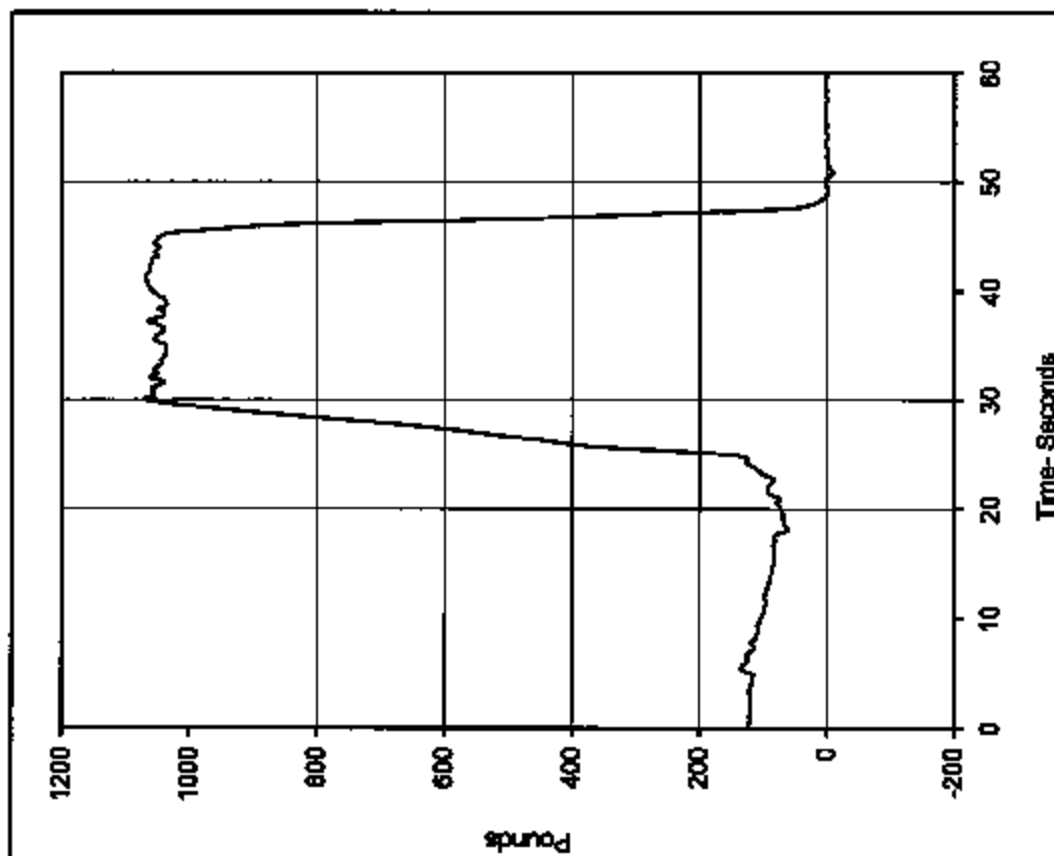
Project No.:

C45204



Curve Description	CURNO	Type
Pass. Lap Force	004	FIL
Pass. Shoulder Force	005	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	2985.2	31.9	-98.6	32.8	1
Pounds	2984.3	31.9	-87.5	32.8	1



Curve Description	CURNO	Type
Driver Seat Force	003	FIL

Units	Max	Time	Min	Time	Filter (Hz)
Pounds	1071.1	30.1	-8.7	50.9	1

Test Program:

FMVSS 207/210 Front Seats

Test Vehicle:

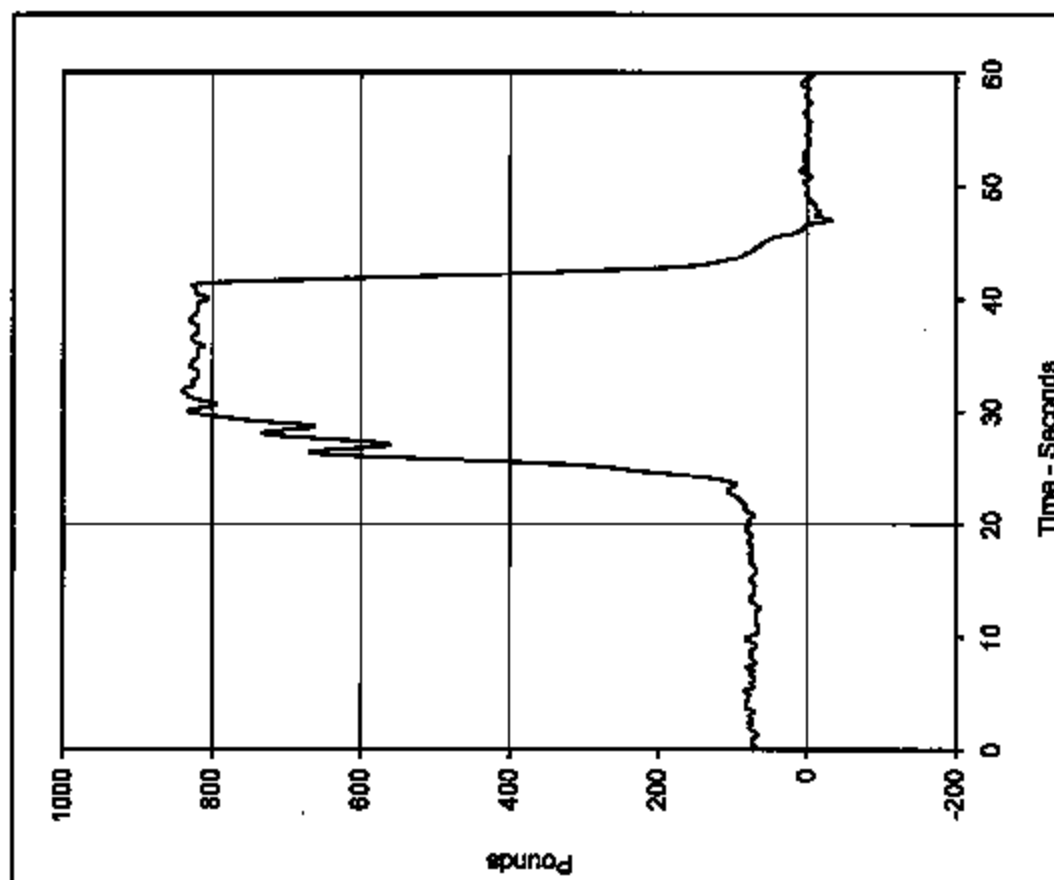
2004 Nissan Maxima 4 Door Sedan

Test Date:

6/23/04

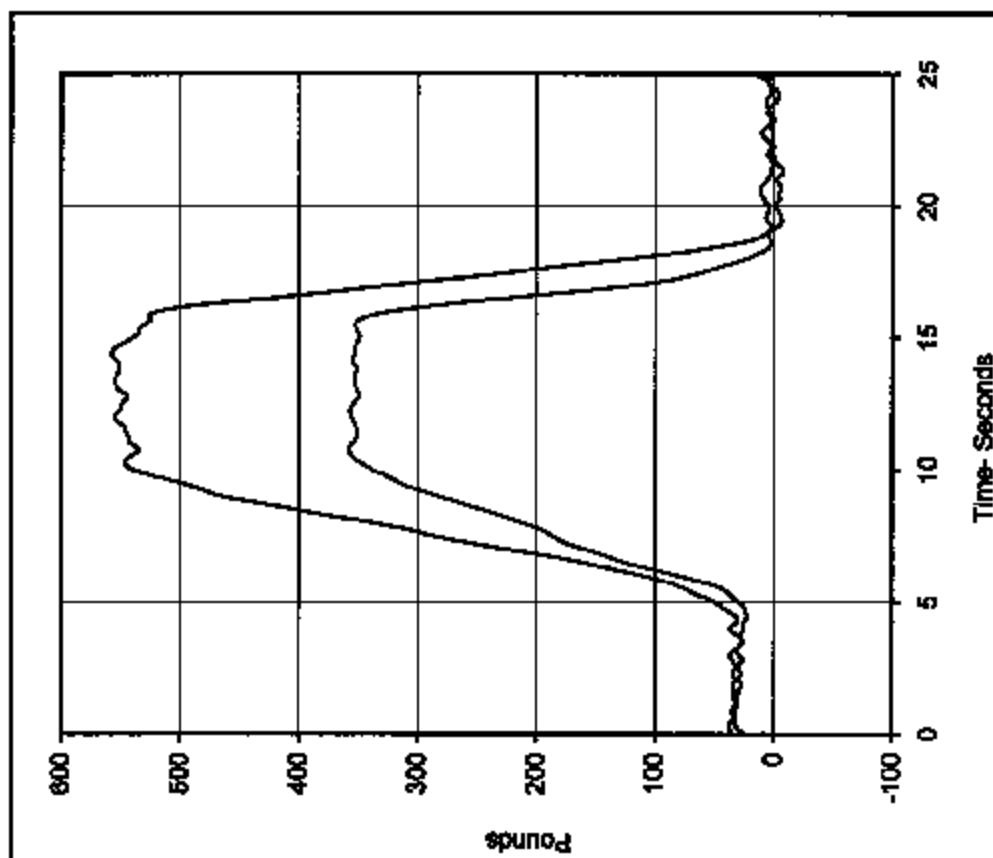
Project No.:

C45204



Curve Description	CURNO	Type
Pass. Seat Force	006	FIL

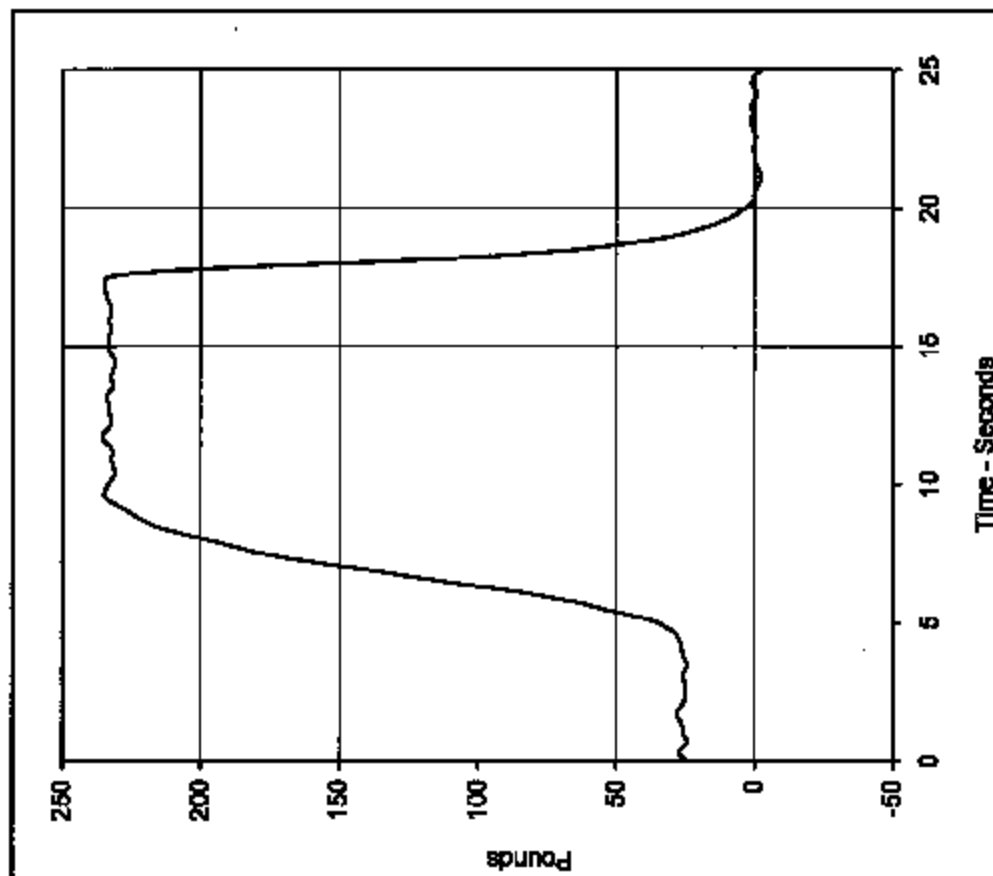
Units	Max	Time	Min	Time	Filter (Hz)
Pounds	838.7	31.6	-32.0	47.1	1



Curve Description	CURNO	Type
Left Rear Seat Back	001	FIL
Right Rear Seat Back	002	FIL

Units	Max	Time	Min	Filter (Hz)
Pounds	557.7	14.4	-8.2	1
Pounds	357.6	10.8	-1.6	1

Test Program: FMVSS 207 Fwd Seat Back & Cushion (Rear)
 Test Vehicle: 2004 Nissan Maxima 4 Door Sedan



Curve Description	CURNO	Type
Rear Seat Cushion	004	FIL

Units	Max	Time	Min	Filter (Hz)
Pounds	235.5	11.7	-2.0	1

Test Date: 8/24/04
 Project No.: C45204



APPENDIX C
TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

**FMVSS 207
Test Equipment List
6/16/04**

2004 Nissan Maxima 4 Door Sedan

Description	Manufacturer	Model No.	Serial No.	Limit	Accuracy	Cal. Date	Due Cal.
Hydraulic Pump	Lincoln	T-3825-C	2480952	8 gpm @ 2700 psi			
Computer	Panasonic	CF-71	81MAAD1852	N/A	N/A	N/A	N/A
TDAS	DTS	TDAS	DM0103	N/A	SAE J211	11/15/03	11/14/04
Load Cell	Lebow	3108	1001	300 LB	± 1.0%	5/20/04	11/18/04
Load Cell	Lebow	3132	622	500LB	± 1.0%	5/20/04	11/18/04
Load Cell	BLH	U3G1	49296	3K	± 1.0%	5/22/04	11/20/04
Load Cell	BLH	U-1C	N873	6K	± 1.0%	5/20/04	11/18/04
Load Cell	BLH	U-1C	11139	12K	± 1.0%	5/20/04	11/18/04
Load Cell	Alinco	342-E	22438-B	10K	± 1.0%	5/22/04	11/20/04
Load Cell	Alinco	342-E	22440-A	10K	± 1.0%	5/22/04	11/20/04
Load Cell	BLH	U3G1	81711A	10K	± 1.0%	5/22/04	11/20/04

